

EXHIBIT 4

Paper No. 3
Filed: October 29, 2019

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MUELLER SYSTEMS, LLC,

Petitioner

v.

REIN TECH, INC.,

Patent Owner

Case IPR2020-00098
U.S. Patent No. 9,297,150

**CORRECTED PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 9,297,150**

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Corrected Petition for *Inter Partes* Review
U.S. Patent No. 9,297,150

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U.S. Patent No. 9,297,150**EXHIBITS CITED**

Exhibit No.	DESCRIPTION
1001	U.S. Patent No. 9,297,150 (“the ‘150 Patent”) to Klicpera
1002	Prosecution History of the ’150 Patent (Appl. No. 13/776,963)
1003	<i>Ex Parte</i> Reexamination History of the ’150 Patent, as of the date of filing this Petition (Appl. No. 90/014,354)
1004	U.S. Patent No. 6,556,142 to Dunstan (“ <i>Dunstan</i> ”)
1005	U.S. Publ. No. 2009/0070682 to Dawes (“ <i>Dawes</i> ”)
1006	U.S. Patent No. 6,237,618 to Kushner (“ <i>Kushner</i> ”)
1007	Rein Tech’s Contact Webpage, https://www.reintechinc.com/contact.html , last accessed Sept. 24, 2019
1008	U.S. Patent No. 9,254,499 to Klicpera
1009	<i>Ex Parte</i> Reexamination History of U.S. Patent No. 8,347,427 (Appl. No. 90/014,351)
1010	U.S. Publ. No. 2011/0114202 to Goseco (“ <i>Goseco</i> ”)
1011	U.S. Patent No. 7,559,529 to Affaticati (“ <i>Affaticati</i> ”)
1012	U.S. Publ. No. 2006/0137090 to Jeffries (“ <i>Jeffries</i> ”)

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1013	Prosecution History of U.S. Provisional Appl. No. 61/729,653 to Klicpera
1014	Declaration of Vijay Madisetti, Ph.D (“Madisetti”)

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I. INTRODUCTION

Petitioner Mueller Systems, LLC (“Mueller”) requests *inter partes* review (“IPR”) and cancellation of claims 8, 12, 15, 17, 20, 21, 23, and 26 of U.S. Patent No. 9,297,150 (“the ’150 patent,” Ex. 1001). The challenged claims are directed to a water damage prevention system that includes a remotely controllable base station with a water shut-off/on mechanism, and a cell phone or “computer system” that can send a wireless signal to the base station to turn the water on or off. This purported invention is nothing more than an obvious use of standard equipment operating in conventional ways and communicating using existing networks.

Indeed, the inventor (who is also the prosecuting attorney) admitted during prosecution that he conceived of monitoring and controlling a main water system as a modification to his existing home security system that allowed him to monitor and control the lights, sprinklers, and alarm states remotely with a cell phone. In the application for the ’150 patent, the inventor described well-known water meters with remotely controllable valves such as that disclosed in a prior art reference *Dunstan*. The inventor then simply copied and slightly modified the figures and disclosure in a prior art reference, *Dawes*, which describes a security system (likely similar to the inventor’s home security system) that allows users to control home devices using a cell phone. As shown below, *Dunstan* in view of *Dawes* renders most of the challenged claims obvious. The remaining two dependent claims recite a feature that

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was also well-known and obvious as exemplified in a prior art reference, *Kushner*.

Lest there be any doubt, the inventor recently filed a request for *ex parte* reexamination on behalf of the patent owner admitting that many of the challenged claims are anticipated by each of eight different prior art references and proposing substantive amendments to all the challenged claims. That proceeding has been instituted and should constitute a concession that all challenged claims of the '150 patent are unpatentable.

Accordingly, the challenged claims of the '150 patent are obvious and should be cancelled.

II. MANDATORY NOTICES

A. Real Party in Interest

In accordance with 37 C.F.R. § 42.8(b)(1), Mueller identifies Mueller Systems, LLC, and its parent company, Mueller Water Products, Inc., a public company, as the real parties in interest.

B. Related Matters

In accordance with 37 C.F.R. § 42.8(b)(2), Mueller has been sued for allegedly infringing the '150 patent in *Rein Tech, Inc. v. Mueller Systems, LLC*, No. 1:18-cv-1683-MN (D. Del.). The case was filed on October 26, 2018, and remains pending. Patent Owner Rein Tech, Inc. ("Patent Owner" or "Rein Tech") is asserting challenged claims 8, 12, 15, and 17 against Mueller, and has purported to reserve the

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right to assert additional claims of the '150 patent.

The '150 patent was also involved in the following proceedings: *Rein Tech, Inc. v. Flo Technologies, Inc.*, No. 1:18-cv-1682-MN (D. Del.) and *Rein Tech, Inc. v. Xylem, Inc.*, No. 1:18-CV-1684-MN (D. Del.). Those proceedings concluded in January and March, 2019, respectively.

The '150 patent issued from U.S. Patent Application No. 13/776,963 (the “'963 application”). A copy of the file history of the '963 application is attached as Exhibit 1002. There are three patents that claim priority to the '963 application: U.S. Patent Nos. 9,494,480; 9,749,792 (the “'792 patent”); and 10,410,501. The '792 patent is the subject of a pending *ex parte* reexamination proceeding filed by Rein Tech: U.S. Serial No. 90/014,355.

In addition, the '150 patent is the subject of a pending *ex parte* reexamination proceeding filed by Rein Tech: U.S. Serial No. 90/014,354. A copy of the reexamination file history for the '150 patent is attached as Exhibit 1003.

C. Lead and Backup Counsel and Service Information

In accordance with 37 C.F.R. § 42.8(b)(3)-(4), Mueller’s identification of counsel and service information is provided below.

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D. Power of Attorney and Fees

Mueller is filing a power of attorney concurrently with this petition, as well as electronic payment of the fee specified by 37 C.F.R. § 42.15(a). If additional fees are due at any time throughout the course of these proceedings, the undersigned authorizes the U.S. Patent and Trademark Office to charge such fees to Deposit Account No. 50-5154.

III. GROUNDS FOR STANDING

Pursuant to 37 C.F.R. § 42.104(a), Mueller certifies that the '150 patent is available for IPR and that Mueller is not barred or estopped from requesting this IPR

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on the grounds identified herein.

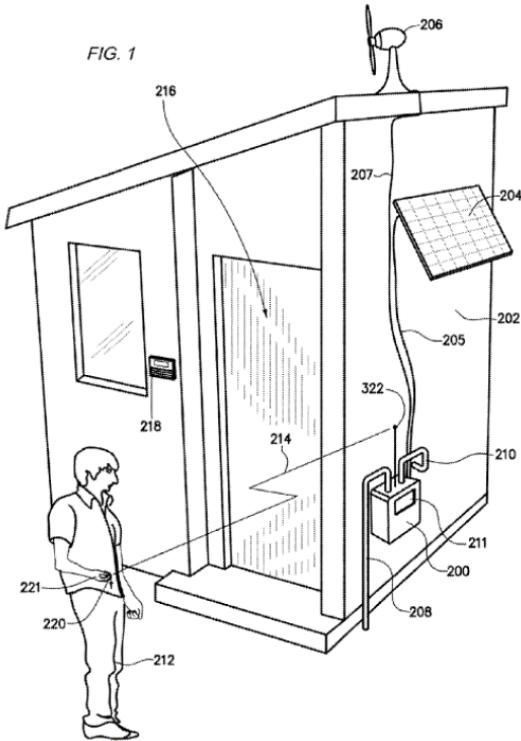
IV. THE '150 PATENT

A. Overview

The '150 patent is directed to a water damage prevention system for a building or other structure. (Ex. 1001, claims 8 and 21.) The patent discloses that “the water damage prevention system of the present invention generally comprises a remotely controllable base station 200 with water shut-off/on mechanism 310 strategically located between a main supply line 208 from a water main and a household water supply line 210 to a residential building 202.” (*Id.*, 4:24-28.)

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'150 Patent, Figure 1



The '150 patent states that the base station “is activated and deactivated by a remote controller 220 to selectively turn on and off the water through the household water supply line 210.” (*Id.*, 4:29-32.) The remote controller may comprise “a remote wireless key chain or key fob apparatus,” “a programmable alarm keyboard,” “a specific garage door opener,” or “a cell phone, smart phones [sic], or similar apparatus.” (*Id.*, 5:67, 6:7-8, 6:11, 6:14-15.) According to the specification, “[o]ne of the key features of the present invention” is having a “convenient and easy means” to activate and deactivate the water flow, which leads to “a high percentage of use when a residential home or industrial/commercial facility or building becomes

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vacated or unsupervised” and to increased damage prevention. (*Id.*, 5:58-63, Abstract; Ex. 1014 (“Madisetti”) ¶¶27-28.)

The ’150 patent names Michael E. Klicpera as the sole inventor. (Ex. 1001.) According to USPTO records, the ’150 patent is assigned to Rein Tech. According to Rein Tech’s website, Rein Tech was founded by Klicpera, who is a registered patent attorney. (Ex. 1007.) The ’150 patent is part of a large family of patents and patent applications, all filed and prosecuted by Klicpera, that generally relate to water conservation. (Ex. 1001.)

B. The Specification

The specification discloses that the claimed water damage prevention system is comprised of standard equipment that operates in conventional ways and communicates using existing networks. (Madisetti ¶30.) For example, the specification discloses that the “remotely controllable base station” could function as the main water meter and thus could be a “*standard* meter,”¹ such as a multi-jet meter, positive displacement meter, or single jet meter as known in the art. (Ex. 1001, 9:49-51, 10:21, 9:52-10:32.) The specification also explains that the “water shut-off/on mechanism” “can be a ball valve, gate valve type, piston valve, *or other*

¹ In this Petition, all emphasis in the quotations has been added unless otherwise indicated.

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known technology with electronic activation.” (Id., 9:24-27.)

The specification further discloses that the remote controller can be “*a typical* cell phone, smart phones [sic], or similar apparatus 400 having an application 402, *commonly known as* an ‘APP.’” (Id., 13:14-16.) In addition, the specification describes how “[t]ypical cell phones, smart phones, and similar apparatuses 400 may have one or more means of communication that can be established with a particular remotely controllable base station 200 for wireless communication.” (Id., 14:43-46.) For example, the specification explains that WiFi, which “*is commonly a feature* found on many cell phones, smart phones and similar apparatus,” or “cellular wireless technology,” which “*is a primary feature* of cells [sic] phones, smart phones and similar apparatus,” “can be a means to communicate remotely with the remotely controllable base station 200 with water shut-off/on mechanism 310 to turn the water on or off or receive text messages.” (Id., 14:56-59, 15:14-15, 14:59-62, 15:16-19.)

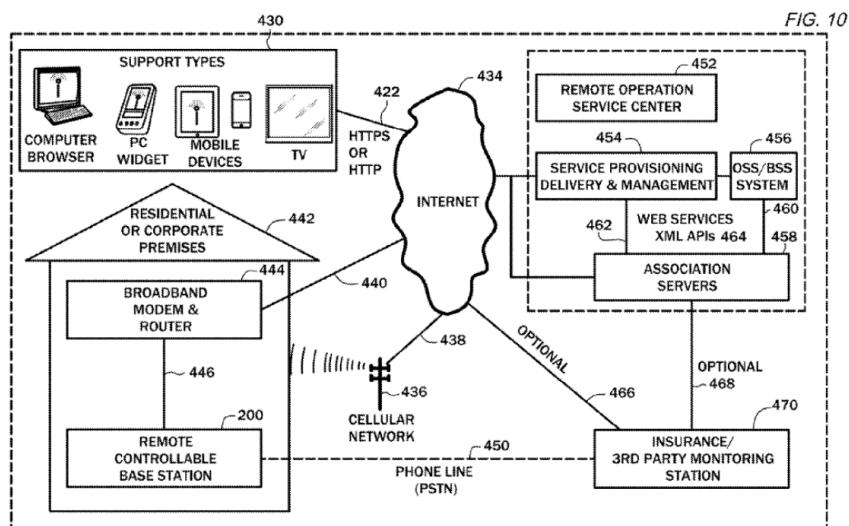
In addition to describing the system components as “standard,” “commonly known,” and “typical,” the ’150 patent specification describes details of the system components using multiple figures and several columns of detailed description that were copied from the prior art. (Madisetti ¶32.) For example, Figures 10, 11, and 12 of the ’150 patent are substantially identical to Figures 1, 2, and 3 of U.S. Patent Publ. No. 2009/0070682 to Dawes (“Dawes”) (Ex. 1005), and nearly all the detailed description for these figures in columns 16-21 of the ’150 patent, was copied, in

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substantially identical form, from the description in *Dawes*. (Madisetti ¶32.)

For instance, the '150 patent describes Figure 10 as “*a block diagram of the present invention*, under another embodiment that provides additional integrity technology for the transfer of data.” (Ex. 1001, 16:29-31.) As shown below, this figure was copied from Figure 1 of *Dawes* (Ex. 1005, 2):

'150 Patent, Figure 10



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Dawes Prior Art, Figure 1

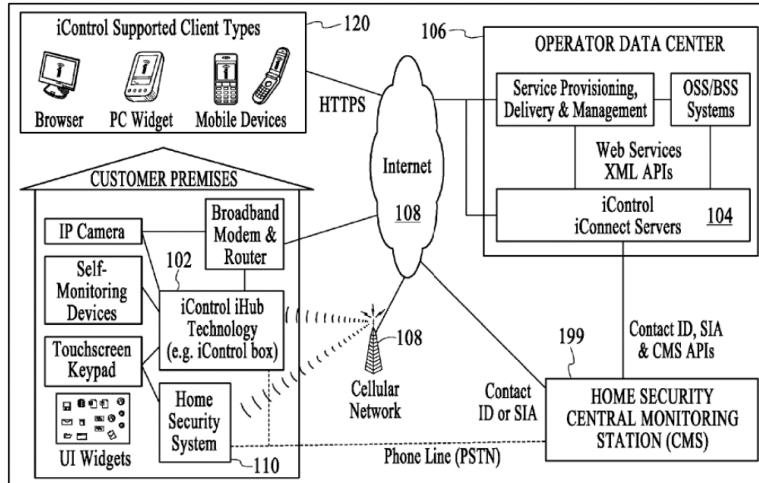
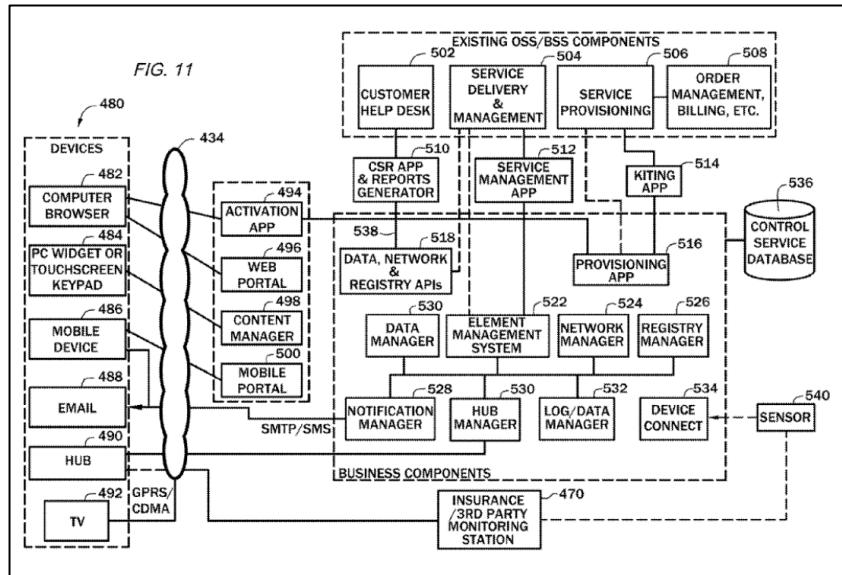


FIG.1

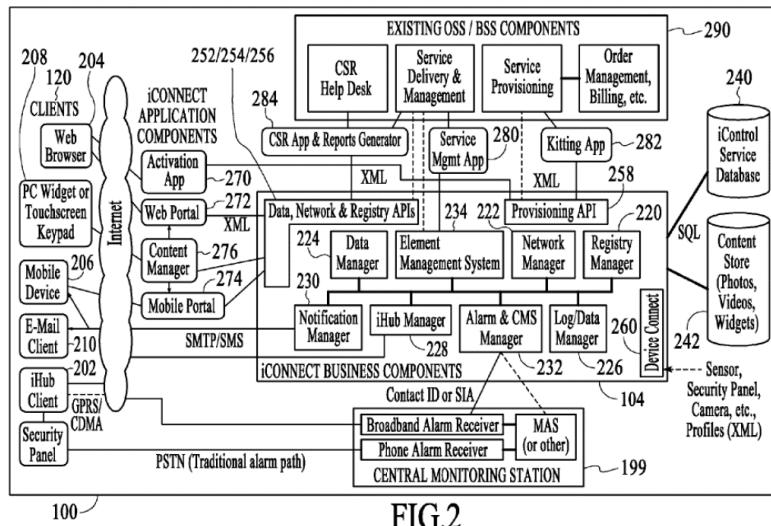
Similarly, the '150 patent describes Figure 11 as “*a block diagram of components of the present invention*, under an embodiment, showing a more detailed description of the components.” (Ex. 1001, 17:14-16.) As shown below, this figure was copied from Figure 2 of *Dawes* (Ex. 1005, 3):

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'150 Patent, Figure 11



Dawes Prior Art, Figure 2



Further, the '150 patent describes Figure 12 as “a block diagram including base station software or applications,” referring to the claimed remotely controllable base station (Ex. 1001, 19:63-64.) As shown below, this figure was copied from

Corrected Petition for *Inter Partes Review*
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'150 Patent, Figure 12

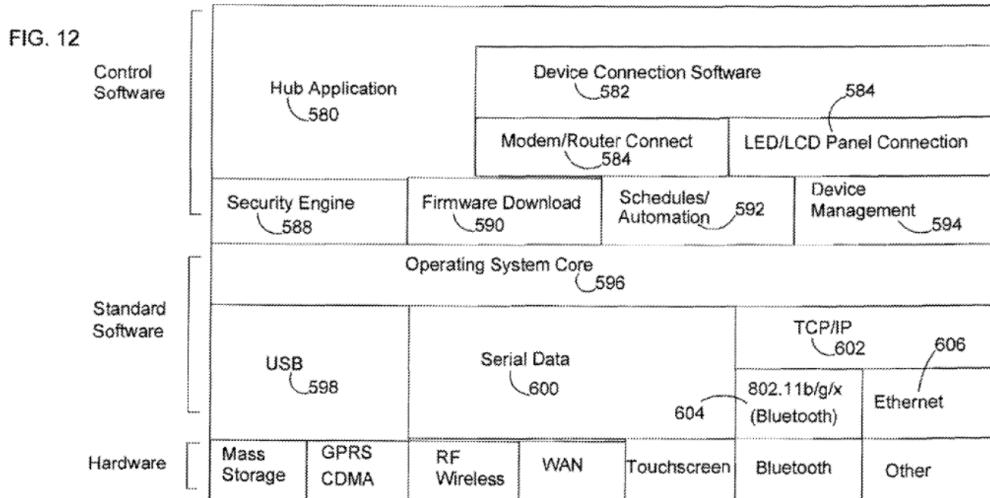
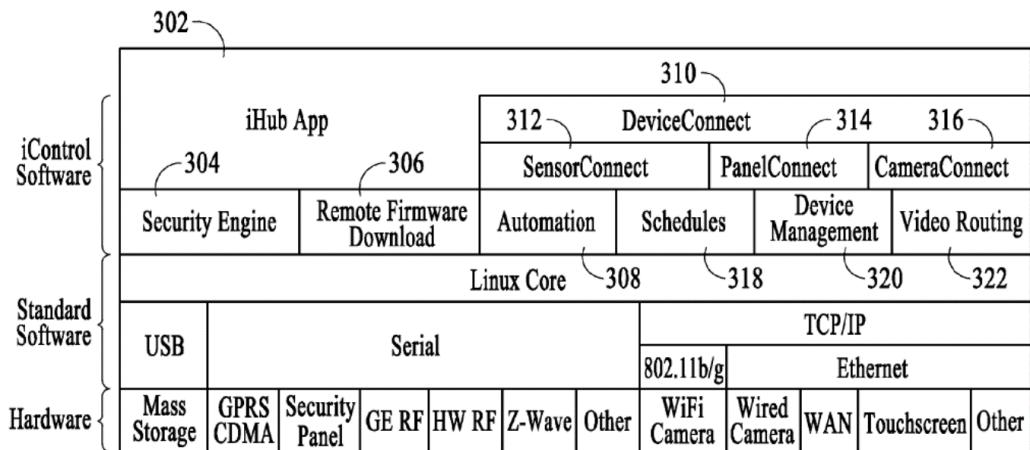
*Dawes Prior Art, Figure 3*

FIG.3

Dawes generally relates to an “integrated security system” that “delivers remote premise monitoring and control functionality” and enables users to “control

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home devices via a personal web portal, mobile phone, or other client device.” (Ex. 1005, Abstract.) Minor edits were made to figures and detailed description of *Dawes* to refer to components of a water damage prevention system for controlling a base station, instead of a security system for controlling home devices. *Compare, e.g., Dawes*, Ex. 1005, ¶[0118] with the ’150 patent, Ex. 1001, 20:8-12.

In fact, the copying of *Dawes* was so pervasive that numerous references to the “integrated security system” of *Dawes* were left unchanged in the ’150 patent specification. *E.g.*, Ex. 1001, 17:26-30, 18:7-9, 18:54-57, 19:10-12.²

C. The Prosecution History

The application for the ’150 patent was filed on February 26, 2013, as a continuation-in-part application and purported to claim priority to several prior, domestic applications. (Ex. 1002, 9, 74-75.) The application was filed and prosecuted by Klicpera. (*Id.*, 1-5.) As filed, the independent claims were substantially similar, but claimed different elements for sending a wireless signal to the remotely controllable base station to turn the water supply on and off. (*Id.*, 47-

² Mueller expects that discovery in the related litigation will reveal additional evidence of copying from the prior art. For instance, in a pending *ex parte* reexamination of a related patent, Klicpera admitted that disclosure relating to data encryption was “copied and plagiarized” from prior art U.S. Publ. No. 2004/0193329 to Ransom. (Ex. 1009, 6.)

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53.)

The Examiner initially rejected claim 24 as anticipated by U.S. Publ. No. 2011/0114202 to Goseco (“*Goseco*”) (Ex. 1010), Ex. 1002, 121-122, and rejected claim 10 as obvious over *Goseco* in view of U.S. Patent No. 7,559,529 to Affaticati (“*Affaticati*”) (Ex. 1011), Ex. 1002, 127-128. In response, Klicpera filed substantive amendments to the specification and claims. (*Id.*, 149-169.) For pending claim 10, Klicpera added limitations requiring, *e.g.*, that “said remotely controllable base station include[e] a recording compliance data means” and requiring that the claimed cell phone, smart phone, or similar apparatus have “an application (‘APP’)” that performs various claimed functions. (*Id.*, 162-163.) For pending claim 24, Klicpera added, *e.g.*, the “recording compliance data means” limitation and broadened the “alarm system” limitation to include “an alarm *or* computer system.” (*Id.*, 166-167.)

Klicpera also argued that *Goseco* and *Affaticati* failed to disclose certain claim limitations, including a “recording compliance data means,” required by the amended claims. (*Id.*, 174-176, 185-188.) Klicpera further argued that *Affaticati* “fails to disclose any software ‘APP’ that is specifically designed to turn on, off or to an intermediary position, the main water supply as disclosed and claimed by the independent claim 10.” (*Id.*, 187.) In addition, Klicpera submitted a Rule 131 Declaration stating that he conceived of monitoring and controlling a main water system with an “appropriate control valve” as a modification to his existing home

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automation and security system that allowed him to “monitor and control the lights, sprinklers, and alarm states remotely with a cell phone.” (*Id.*, 197-200.)

In a Final Office Action, the Examiner rejected claim 24 as obvious over U.S. Patent No. 6,237,618 to Kushner (“*Kushner*”) (Ex. 1006) in view of U.S. Publ. No. 2006/0137090 to Jeffries (“*Jeffries*”) (Ex. 1012). (Ex. 1002, 276-282.) The Examiner stated that claim 10 would be allowable if rewritten to overcome the Section 112 rejections because the prior art purportedly failed to disclose “said remote controllable base station including a recording compliance data means” in combination with the other claim limitations. (*Id.*, 283.)

In response, Klicpera made various claim amendments, including adding a limitation to claim 24 requiring that “said wireless signal utilizing encryption, authentic, integrity and/or non-repudiate technology.” (*Id.*, 322-332.) Klicpera argued that “neither Kushner nor Jeffries disclose or claim a wireless signal that utilizes encryption, authentic, integrity and/or non-repudiate technology.” (*Id.*, 337.) Thereafter, the application was allowed, with pending claim 10 issuing as independent claim 8 and pending claim 24 issuing as independent claim 21. (*Id.*, 382.)

D. The Pending *Ex Parte* Reexamination

On August 2, 2019, Klicpera, on behalf of Rein Tech, filed a request for *ex parte* reexamination of claims 8-19 and 28 of the ’150 patent. (Ex. 1003, 1-3.) In the

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request, Rein Tech admitted that each of eight different prior art references raised an independent, substantial new question of patentability for claims 8-19 and 28. (*Id.*, 9-11.) Indeed, Rein Tech admitted that each cited reference “anticipates claims 8-19 and 28 of the ’150 Patent.” (*Id.*, 7.) Rein Tech also submitted a preliminary amendment with substantive amendments to the specification and claims. (*Id.*, 59-75.) The amendment seeks to add, delete, and modify limitations in claims 8-19 and 28, as well as in claims 1-7 and 20-27 for which reexamination was not specifically requested. (*Id.*, 62-75.) Such proposed amendments amount to a concession that all claims of the ’150 patent are unpatentable. *M&P Golf v. Max Out Golf*, IPR2016-00784, Paper 43 at 4, 2017 Pat. App. LEXIS 11467, *5 (PTAB Aug. 30, 2017) (construing claim amendments made by patent owner in concurrent, *ex parte* reexamination to be “an abandonment of contest and a concession of unpatentability” as to original claims of issued patent).

On September 10, 2019, the Examiner granted *ex parte* reexamination of claims 8-19 and 28. (*Id.*, 286-304.) The Examiner acknowledged that “[e]ach reference listed [by Rein Tech] is admitted to be prior art under 35 USC §102 and 35 USC §103.” (*Id.*, 288.) The Examiner agreed that each cited reference raises a substantial new question of patentability. (*Id.*, 295-301.)

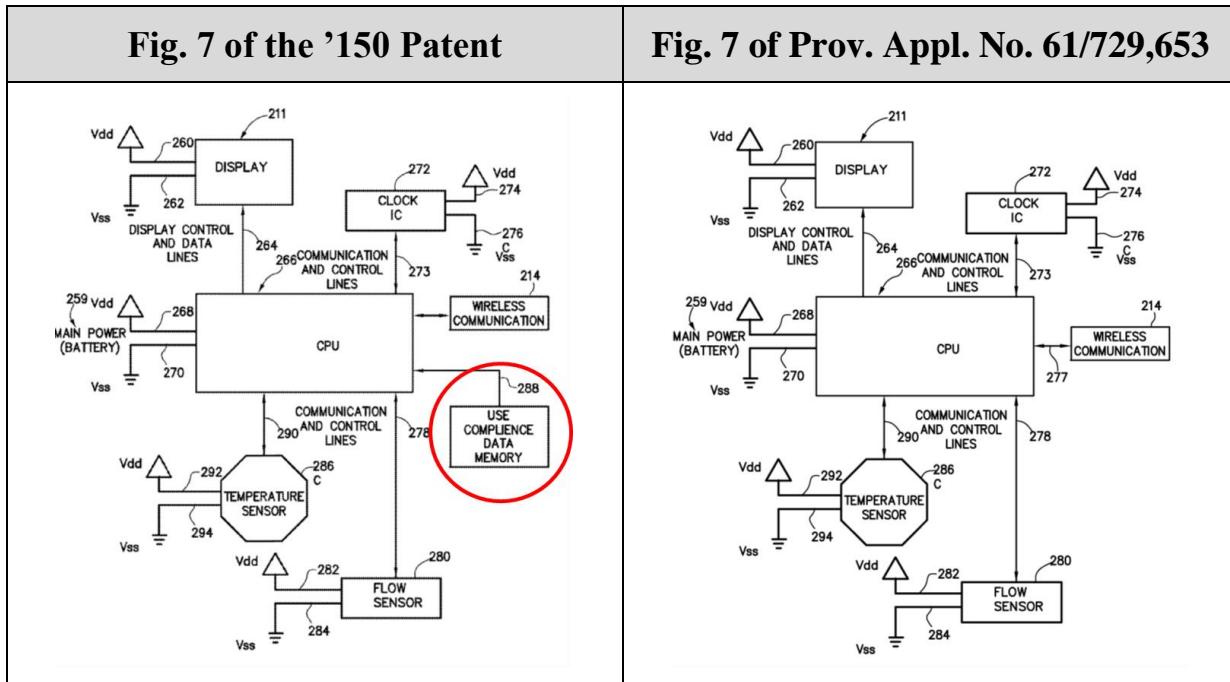
E. The Earliest Effective Priority Date for the Challenged Claims

The application for the ’150 patent, Appl. No. 13/776,963 (“the ’963

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application”), was filed on February 26, 2013, as a continuation-in-part application and purports to claim priority through five continuation-in-part applications, a divisional application, and an original application filed on October 24, 2007. (Ex. 1001; Ex. 1002, 74-75.) The ’963 application also claims the benefit of provisional Appl. No. 61/729,653 filed on November 26, 2012. (*Id.*)

Challenged independent claims 8 and 21 each include the following limitation: “said remotely controllable base station including a recording compliance data means.” (Ex. 1001, claims 8 and 21.) The “recording compliance data means” feature was added to the ’963 application and is not supported by any of the priority applications. (Madisetti ¶48.) For example, the “use compliance [sic] data memory” element depicted in Figure 7 of the ’150 patent was added to Figure 7 of the continuation-in-part ’963 application (Ex. 1002, 58) and is not included in any of the priority applications, including Figure 7 of the provisional application (Ex. 1013, 43). (Madisetti ¶48.)

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Similarly, the disclosure in the '150 patent concerning “the capability to record compliance use data” (Ex. 1001, 11:9-23) was added to the continuation-in-part '963 application (Ex. 1002, 30)³ and is not included in any of the priority applications. (Madisetti ¶49.)

Consequently, the earliest priority date for the Challenged Claims is the filing date of the '963 application, i.e., February 26, 2013.⁴ (Madisetti ¶50.) Indeed, in the

³ During prosecution, Klicpera pointed solely to Figure 7 and ¶53 of the '963 application (Ex. 1002, 30, 58) as providing support for the “recording compliance data means” limitation. (*Id.*, 174.)

⁴ In addition, with respect to claim 8, the limitation requiring a cell phone,

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pending *ex parte* reexamination, the Examiner determined that the effective filing date of independent claim 8 and its dependent claims is the filing date of the '963 application. (Ex. 1003, 292.)

Moreover, as discussed above, Figures 10-12 and much of the detailed description intended to support the scope of the '150 patent claims were copied from *Dawes*, which was filed on August 25, 2008. (Ex. 1005.) Despite purporting to claim priority through a chain of applications to U.S. Appl. No. 11/877,860⁵ filed before *Dawes* on October 4, 2007, the '150 patent cannot be granted an effective filing date prior to the copied disclosure of *Dawes*.

The burden is on Rein Tech to establish priority. *Natural Alternatives Int'l v. Iancu*, 904 F.3d 1375, 1380 (Fed. Cir. 2018) (“[C]laims in a patent or patent application are not entitled to priority under § 120 at least until the patent owner proves entitlement to the PTO, the Board, or a federal court.”) (Emphasis in

smart phone, or similar apparatus “having an application (‘APP’)” that performs various claimed functions was added to the provisional application (Ex. 1013, 23-24 (¶76), 44 (Figure 8)) and is not included in any of the other priority applications.

⁵ Klicpera’s original priority application relates to a shower or bath head (Ex. 1008); it fails to provide support for a “remotely controllable base station with a water shut-off/on mechanism interposed between a water line from a water main and a water supply for said building or structure” as claimed in claims 8 and 21 of the '150 patent. (Madisetti ¶52.)

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original.). Here, Rein Tech is unable to show that the Challenged Claims are entitled to an effective filing date or date of invention prior to the filing date of *Dawes* or the other prior art references cited herein.

V. STATEMENT OF THE PRECISE RELIEF REQUESTED

A. Claims for Which Review is Requested

Mueller respectfully requests review under 35 U.S.C. § 311 of claims 8, 12, 15, 17, 20, 21, 23, and 26 of the '150 patent (the “Challenged Claims”), and the cancellation of the Challenged Claims as unpatentable.

B. Statutory Grounds of Challenge

Mueller requests IPR and cancellation of the Challenged Claims of the '150 patent based on the following grounds:

Ground 1: Claims 8, 15, 17, 20, 21, and 26 are unpatentable under 35 U.S.C. § 103 as obvious over *Dunstan* in view of *Dawes*.

Ground 2: Claims 12 and 23 are unpatentable under 35 U.S.C. § 103 as obvious over *Dunstan* and *Dawes* in view of *Kushner*.

C. Citation of Prior Art

In support of the grounds of unpatentability set forth above, Mueller cites the following prior art references:

Prior Art References	
Ref. 1:	<i>Dunstan</i> , U.S. Patent No. 6,556,142 (Ex. 1004); issued on April 29,

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	2003, from an application filed in the United States on September 20, 2001; prior art under at least pre-AIA 35 U.S.C. §§ 102(b) and 102(e).
Ref. 2:	<i>Dawes</i> , U.S. Patent Publ. No. 2009/0070682 (Ex. 1005); published on March 12, 2009, from an application filed in the United States on August 25, 2008; prior art under at least pre-AIA 35 U.S.C. §§ 102(b) and 102(e).
Ref. 3:	<i>Kushner</i> , U.S. Patent No. 6,237,618 (Ex. 1006); issued on May 29, 2001, from an application filed in the United States on July 6, 2000; prior art under at least pre-AIA 35 U.S.C. §§ 102(b) and 102(e).

VI. CLAIM CONSTRUCTION

In an IPR, claims are “construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b).” 37 C.F.R. § 42.100(b). Claims must be given their ordinary and customary meaning as understood by a person of ordinary skill in the art at the time of the invention in light of the specification and the prosecution history pertaining to the patent. *Id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-1313 (Fed. Cir. 2015) (*en banc*). Below, Mueller provides a construction for certain terms in the Challenged Claims. As to the remaining terms, for the purposes of this proceeding, those claims should be given their plain and ordinary meaning, as understood by a person of ordinary

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skill in the art and consistent with the intrinsic evidence.⁶

A. Level of Ordinary Skill in the Art

A person of ordinary skill in the art of the '150 patent would have had a minimum of a Bachelor's degree in electrical engineering, computer engineering, computer science, or a related field, and two or more years of experience in the development or design of wireless communication systems, or the equivalent. (Madisetti ¶54.) Additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education. (*Id.*) A person having this background would have understood how to design and build wireless communications systems for monitoring and controlling remote devices. (*Id.*)

B. Terms to be Construed

Pursuant to 37 C.F.R. § 42.104(b)(3), Mueller proposes the following constructions.

1. “a wireless cell phone, smart phone or similar apparatus”

This term is recited in independent claims 8 and 21, and in dependent claims

⁶ Mueller's proposed constructions (or lack thereof) for the purpose of this proceeding are not an admission that any claims are valid under 35 U.S.C. § 112. Mueller expressly reserves the right to raise, and does not waive, any argument that claim terms in the '150 patent are indefinite or otherwise invalid.

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17 and 20. Under *Phillips*, this term means “(i) a cellular phone, mobile phone, PDA, tablet, Apple IPOD Touch, or other touchscreen (ii) a television, watch, timepiece, or fob watch with WiFi and wireless capability, or (iii) a remote computer or controller having internet or wireless connectivity.” (Madisetti ¶66.)

This construction is mandated by the patent specification, which expressly defines the scope of devices encompassed by this term. Ex. 1001, 4:10-22 (providing that “[a] typical cell phone, smart phones [sic], or similar apparatus includes all remote cellular phones using channel access methods defined above[,] mobile phones, PDAs, tablets[,], Apple IPOD Touch, or a television, watch, timepiece or fob watch and other similar apparatus with WIFI and wireless capability, and remote computers and controllers having internet or wireless connectivity.”); 17:16-21 (identifying, with reference to Figure 11, “diverse collection” of wirelessly connected “apparatus/devices” ranging from “computer browsers 482, PCs, PC applications or programs 484 or touch screen keypads, mobile devices 486, email 488, hub 490 or wireless (GPRS, GSM or CDMA) or internet connected televisions 492.”); *see also id.*, 13:21-26, 16:44-49.

Rein Tech is bound by the inventor’s express definitions, even if those definitions differ from the ordinary meaning of the term divorced from the specification. *Phillips*, 415 F.3d at 1316 (“[O]ur cases recognize that the specification may reveal a special definition given to a claim term by the patentee

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that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs.”).

If the Board were to disagree with any aspects of Mueller's proposed construction, the term should be construed to at least include a cellular phone or smart phone (given that such devices are specifically recited in the claim term), as well as a mobile phone, PDA, tablet, or other touch screen device (because one of ordinary skill in the art would have understood such devices to each be a “similar apparatus” to a cell phone or smart phone). (Madisetti ¶66.)

2. “a recording compliance data means”

This term is recited in claims 8 and 21 in means-plus-function form. Mueller proposes the following construction in accordance with pre-AIA 35 U.S.C. § 112 ¶ 6:

Identified Function: for recording compliance use data. (Ex. 1001, claims 8 and 21; Madisetti ¶67.) This construction is supported by the specification, which discloses that “[t]he CPU will could [sic] also have the capability to record compliance use data, e.g., time and date stamp for recording each water system shut off or turn on occurrence.” (Ex 1001, 11:9-11). The specification also discloses that compliance use data “can be used by insurance companies, municipality agencies, third parties, or the owner of a residence or company, to determine if the individuals are utilizing the water damage prevention technology or if a during a particular leak

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damage event that the water prevention technology was utilized.” (Ex. 1001, 11:9-17.)

Corresponding Structure: memory accessible by USB or other transfer port, or for transferring compliance use data wirelessly. (Madisetti ¶67.) This construction is supported by the specification, which depicts “use compliance [sic] data memory” in Figure 7 and discloses that the “compliance use data can be downloaded by a USB or other transfer port or transferred wirelessly (or by PSTN) to a support type device, the remote managing operations, or the insurance company, municipality agency or a third party.” (Ex. 1001, 11:17-21.) This construction is also consistent with the prosecution history, wherein Klicpera distinguished the cited prior art by arguing that it failed to disclose “a means to download the compliance data to a USB chip, portal or transfer the data wirelessly to an interested party.” (Ex. 1002, 174.)

3. “said cell phone, smart phone or similar apparatus having an application (‘APP’)”

This term is recited in independent claim 8. Under *Phillips*, this term means “a software program designed to run on a cell phone, smart phone, or other mobile device.” (Madisetti ¶68.)

This construction is supported by the claim language, which recites that the application (APP) “functions to cooperate with said cell phone, smart phone or similar apparatus to send a wireless signal to said base station.” (Ex. 1001, 22:20-

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23). This construction is also supported by the patent specification, which discloses that an APP is “commonly known” and is “programmed to display soft buttons or use control activators on a cell phone, smart phone, or similar apparatus.” (*Id.*, 13:14-18, Figure 8.) Moreover, this construction is supported by the prosecution history, wherein Klicpera described “‘Apps’ (applications)” as “basically self-contained software programs used to enhance cell phone, smart phone, and similar apparatus functionality,” and a “mobile phone ‘App’” as “a software program you can generally download and access directly using your phone or another mobile device.” (Ex. 1002, 187.)

4. “indicating means”

This term is recited in claims 8 and 21 in means-plus-function form. Mueller proposes the following construction in accordance with pre-AIA 35 U.S.C. § 112 ¶ 6:

Identified Function: “for determining the operational state or position of the shut-off/on mechanism.” (Ex. 1001, claims 8 and 21; Madisetti ¶69.)

Corresponding Structure: a visual signal such as an LED, LCD or other light or display, or a verbal signal such as “water off,” “water on,” or a ringtone. (Ex. 1001, 7:48-53, 14:32-42, Figure 8; Madisetti ¶69.)

5. “specific wireless communication means”

This term is recited in claims 17 and 26 in means-plus-function form. Mueller

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proposes the following construction in accordance with pre-AIA 35 U.S.C. § 112 ¶

6:

Identified Function: “to provide a wireless communication link.” (Ex. 1001, claims 17 and 26; Madisetti ¶70.)

Corresponding Structure: a communication link between transceivers using radio-frequency, Bluetooth, ZigBee, WiFi, optical or other wireless technology. (Ex. 1001, 6:17-54; 9:31-33, 14:43-15:23, 16:13-18; Madisetti ¶70.)

VII. THE CHALLENGED CLAIMS ARE UNPATENTABLE OVER THE PRIOR ART.

A. Overview of the Prior Art

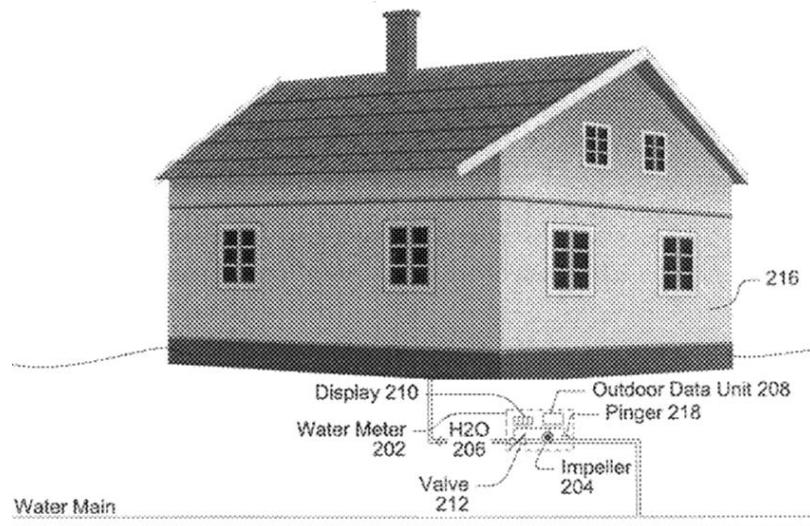
1. *Dunstan* – Remotely Controllable Base Station with Water Shut-Off/On Mechanism

Dunstan generally relates to “a system for communicating information between a utility metering device, such as a water meter, and a remote location, such as inside a residence or a service provider.” (Ex. 1004, 1:9-12.) *Dunstan* discloses that conventional water meters “are isolated from their respective service providers,” provide “no means for the customer to monitor his/her own service usage in real time,” and make it “difficult for the service provider or the customer to recognize a continuous, low usage – a strong indicator of a leak.” (*Id.*, 1:39-51.) To address these problems, *Dunstan* proposes (with reference to Figure 2) a “remotely readable water meter” 202 having an “electronic data unit” 208 that “calculates a volumetric flow

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rate of the water” and controls “a solenoid-operated valve” 212. (*Id.*, 2:21-24, 2:34-36; Madisetti ¶71.)

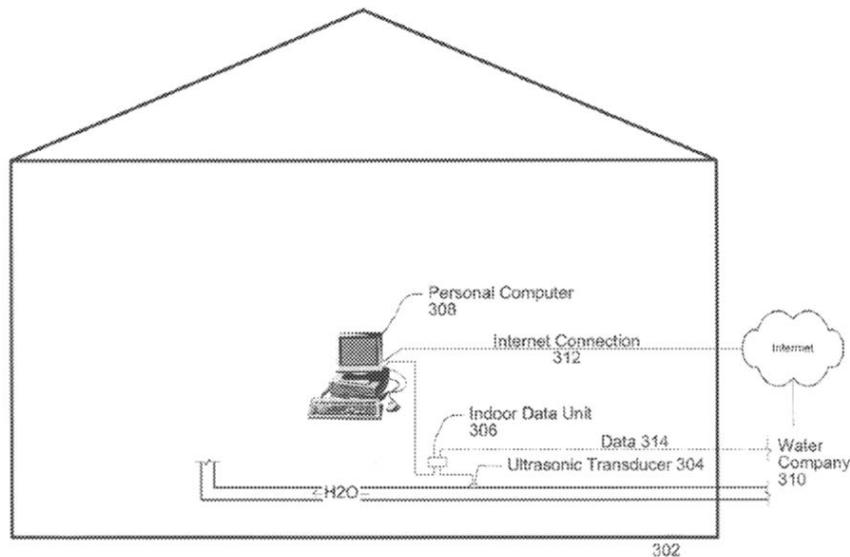
Dunstan, Figure 2



Dunstan teaches that “the valve 212 can be utilized by a homeowner to turn off his/her water . . . from inside his house (from his computer, etc.).” (Ex. 1004, 2:37-39.) In addition, “a water company (or other service provider) may turn off (or increase or reduce) the water supply remotely for various possible reasons (e.g. a suspected water leak or to enforce water restrictions).” (*Id.*, 2:39-43.) For example, and with reference to Figure 3, “the customer or the water company 310 can utilize the connection to the valve 212 . . . to open or close (or partially restrict) the flow of water from a remote location.” (*Id.*, 3:36-39; Madisetti ¶72.)

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Dunstan, Figure 3



Dunstan was identified by the Examiner as a cited reference during prosecution of the '150 patent (Ex. 1002, 138), but was not discussed or applied to the claims.

2. *Dawes – Cell Phone, Smart Phone, or Similar Apparatus With Application (APP) for Remotely Controlling Premises Equipment*

As discussed above, Klicpera admitted during prosecution that he conceived of monitoring and controlling a main water system with an “appropriate control valve” as a modification to his existing home security system that allowed him to “monitor and control the lights, sprinklers, and alarm states remotely with a cell phone.” (Ex. 1002, 197-200.) In the application for the '150 patent, Klicpera simply copied and slightly modified the figures and disclosure in *Dawes*, which describes an “integrated security system” that enables users to “control home devices via a

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personal web portal, mobile phone, or other client device.” (Ex. 1005, Abstract; Madisetti ¶74.) With reference to Figure 1, *Dawes* teaches a system whereby “conventional home security sensors, cameras, touchscreen keypads, lighting controls, and/or Internet Protocol (IP) devices in the home (or business) become connected devices that are accessible anywhere in the world from a web browser, mobile phone or through content-enabled touchscreens.” (Ex 1005, ¶[0045]; Madisetti ¶74.)

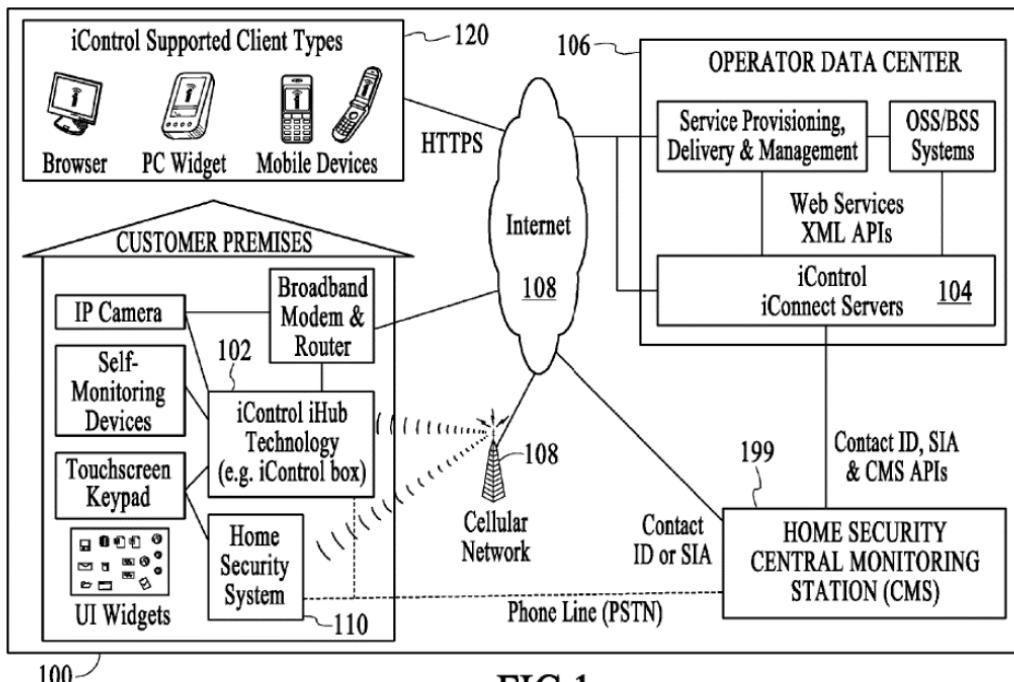
Dawes, Fig. 1

FIG.1

Dawes teaches that “[a] mobile device 206 (e.g., PDA, mobile phone, etc.) . . . is used by end-users to view system status and perform operations on devices (e.g.,

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turning on a lamp, arming a security panel, etc.).” (*Id.*, ¶[0067].) *Dawes* specifically discloses the use of a mobile phone APP for monitoring and controlling “non-security devices” at a customer’s home. (*Id.*, ¶[0212] (describing “a mobile phone application enabling users to monitor and control the extant security system as well as other non-security devices.”); Madisetti ¶75.)

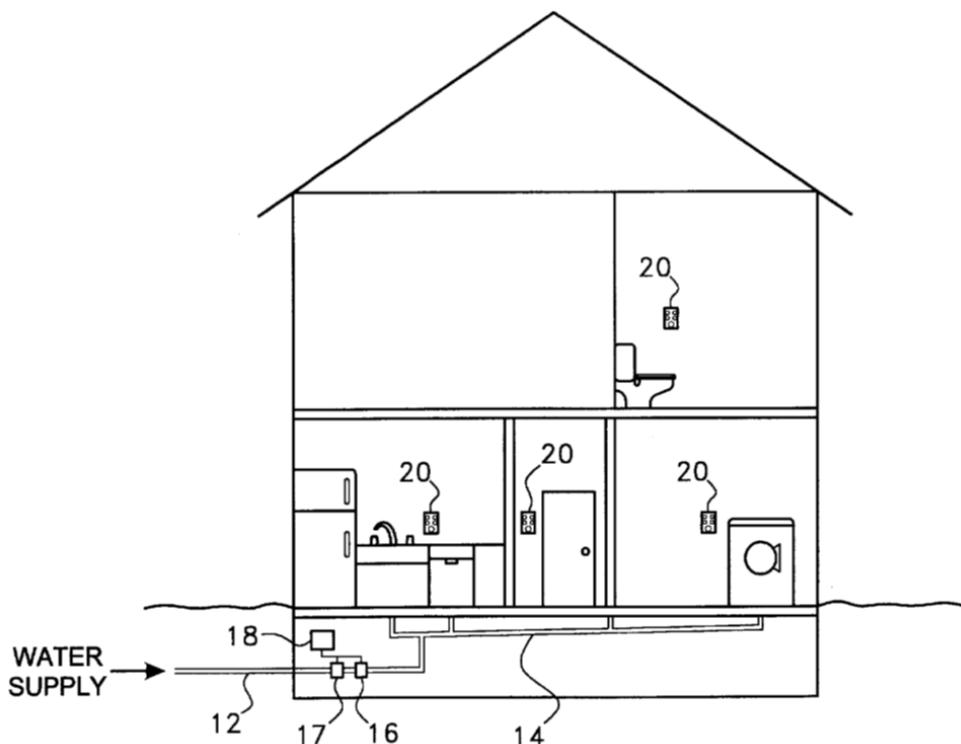
Despite forming the basis for much of the detailed disclosure in the ’150 patent specification, *Dawes* was never disclosed to the USPTO during prosecution and was not cited or considered by the Examiner.

3. *Kushner* – Turning Off Water Supply Upon Detection of a Leak

The system of *Kushner* addressed the need “for a simple, low cost system and method that can stop the flow of water when a leak develops.” (Ex. 1006, 2:7-8.) *Kushner* discloses, with reference to Figure 1 below, a “control housing” 18 that contains a “systems controller that selectively operates [a] shut-off valve 16 depending upon signals from a flow meter 17.” (*Id.*, 3:8-10; Madisetti ¶77.)

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Kushner, Figure 1



Kushner teaches that “if the systems controller 32 detects from the flow meter 17 that flow of water exceeds [a] threshold flow rate[,]” and “the flow of water above the threshold value continues beyond [a predetermined] period of time, the systems controller 32 activates the shut-off valve 16 and stops the flow of water from the water supply pipe 12.” (Ex. 1006, 4:29-38.)

During prosecution, the Examiner cited *Kushner* as teaching the limitations of dependent claim 23 (then pending as claim 26) (Ex. 1002, 282), which require that “said remotely controllable base station includes one or more flow sensors and can be programmed to turn off the water supply upon the detection of a leak by one or

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more flow sensors” (Ex. 1001, claim 23). These limitations are also the subject of dependent claim 12. (Ex. 1001, claim 12.) In response, Klicpera argued that independent claim 21 (then pending as claim 24) was allowable as amended, and did not refute the Examiner’s application of *Kushner* to the subject matter of the dependent claims. (Ex. 1002, 308-309.)

B. Ground 1: *Dunstan* and *Dawes* Render Obvious Claims 8, 15, 17, 20, 21 and 26.

1. Rationale for Combining *Dunstan* and *Dawes*

As discussed above, *Dunstan* discloses a remotely controllable base station with a water shut-off/on mechanism that can be controlled from a remote location using wireless communication, such as by the water company upon detection of a potential water leak. (Ex. 1004, 2:36-43, Figures 2-3.) As also discussed above, *Dawes* discloses using a cell phone with an “app” to remotely view system status and perform operations on devices at the home. (Ex. 1005, Figure 1, ¶[0067], ¶[0212].) It would have been obvious to one of ordinary skill in the art to provide wireless communication between the base station of *Dunstan* and a cell phone, smart phone, or similar apparatus having an application (APP) as taught by *Dawes* to send a wireless signal to the base station and turn the water supply on or off. (Madisetti ¶80.)

Both *Dunstan* and *Dawes* relate to remotely monitoring and controlling

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premises equipment. Ex. 1004, 1:9-12 (“[T]he present invention relates to a system for communicating information between a utility metering device, such as a water meter, and a remote location, such as inside a residence or a service provider.”); Ex. 1005, Abstract (“The integrated security system delivers remote premise monitoring and control functionality to conventional monitored premise protection and complements existing premise protection equipment.”). A skilled artisan would have recognized that *Dunstan* and *Dawes* are within the same general field and directed to similar problems. (Madisetti ¶81.)

A person of ordinary skill in the art would have been motivated to provide wireless communication between the cell phone and app of *Dawes* and the base station of *Dunstan* to give users better access to information about their water usage and more convenient control over their water supply, particularly in cases of a suspected water leak. (Madisetti ¶82.) For example, *Dawes* discloses that “with the proliferation of the internet, ethernet and WiFi local area networks (LANs) and advanced wide area networks (WANs) that offer high bandwidth, low latency connections (broadband), as well as more advanced wireless WAN data networks (e.g. GPRS or CDMA 1xRTT) there increasingly exists the networking capability to extend these traditional security systems to offer enhanced functionality.” (Ex. 1005, ¶0019’.) *Dawes* also discloses that “the proliferation of broadband access has driven a corresponding increase in home and small business networking technologies and

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devices.” (*Id.*) As a result, teaches *Dawes*, “[i]t is desirable to extend traditional security systems to encompass enhanced functionality such as the ability to control and manage security systems from the world wide web, cellular telephones, or advanced function internet-based devices.” (*Id.*)

While this disclosure relates primarily to security systems, a skilled artisan would recognize that *Dawes*’s teachings as to the advantages of extending networking capability and enhancing functionality by controlling and managing systems from cell phones would be applicable to other premises equipment, such as water meters. (Madisetti ¶83.) Indeed, *Dawes* expressly discloses “a mobile phone application enabling users to monitor and control the extant security system *as well as other non-security devices.*” (Ex. 1005, ¶[0212].) *Dunstan* discloses a need for “a system for communicating information between a utility metering device and a remote location” to, e.g., allow “the customer to monitor his/her own service usage in real time.” (Ex. 1004, 1:45-55.) A person of ordinary skill in the art would have looked to *Dawes* and found a solution for making devices at the home “accessible anywhere in the world from a web browser, mobile phone, or through content-enabled touchscreens.” (Ex. 1005, ¶[0045]; Madisetti ¶83.)

A skilled artisan would have had a reasonable expectation of success by using the combination of *Dunstan* and *Dawes*, and would have expected the system to yield predictable results. (Madisetti ¶84.) *Dunstan* already discloses that the water

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meter with valve and data unit is accessible and may be controlled remotely, such as by the water company. (Ex. 1004, 2:36-43, 3:33-39, Figure 3, Figure 4d.) *Dawes* merely provides additional examples of known communication networks and devices that could be used to increase the accessibility and control taught by *Dunstan*. (Madisetti ¶84.)

The obviousness of providing wireless communication between the cell phone and app of *Dawes* and the base station of *Dunstan* is confirmed by Klicpera's admission during prosecution of the '150 patent that he conceived of monitoring and controlling a main water system as a modification to his existing home security system that allowed him to "monitor and control the lights, sprinklers, and alarm states remotely with a cell phone," (Ex. 1002, 197-200), as well as Klicpera's copying of several figures and extensive detailed description from *Dawes*. (Madisetti ¶85.)

2. Claim 8

In this Petition, Mueller's application of the prior art to the Challenged Claims is based on the current language of the Challenged Claims in the '150 patent as issued. As noted above, Rein Tech is seeking to substantively amend the Challenged Claims in the pending *ex parte* reexamination of the '150 patent (Ex. 1003, 62-75). Should a reexamination certificate issue with any amendments to the Challenged Claims, or should Rein Tech seek to make claim amendments in this proceeding,

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Mueller reserves the right to provide additional argument and evidence to address such amendments.⁷

a. *A building or structure water damage prevention system, said system comprising:*

Dunstan discloses this feature. *Dunstan* discloses “a system for communicating information between a utility metering device, such as a water meter, and a remote location, such as inside a residence or a service provider.” (Ex. 1004, 1:9-12.) *Dunstan* teaches that “a water company (or other service provider) may turn off (or increase or reduce) the water supply remotely for various possible reasons (e.g. a suspected water leak or to enforce water restrictions).” (*Id.*, 2:39-43.) One of skill in the art would understand that turning off the water supply due to a suspected water leak prevents damage to the residence, which is a building or structure. (Madisetti ¶87.)

b. *a remotely controllable base station with a water shut-off/on mechanism interposed between a water line from a water main and a water supply for said building or structure;*

⁷ For example, Mueller reserves the right to show that any proposed substitute claims in this proceeding constitute non-statutory subject matter under 35 U.S.C. § 101. *Amazon.com, Inc. v. Uniloc Luxembourg S.A.*, IPR2017-00948, Paper No. 31 at 56-63 (PTAB Aug. 1, 2018) (concluding that substitute claims are ineligible under § 101).

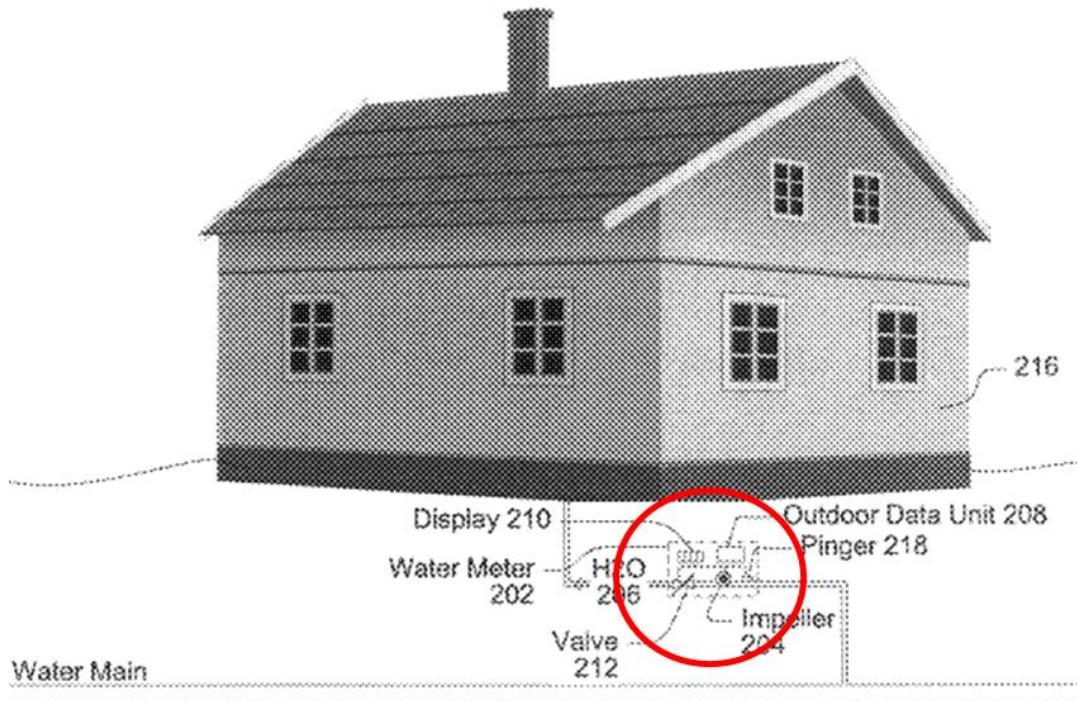
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Dunstan discloses this feature by disclosing “a remotely readable meter,” such as a water meter 202, having “a solenoid-operated valve 212 attached in line of the water pipe 214 [that] is controlled by [a] data unit 208.” (Ex. 1004, 2:13-14, 2:34-36.) In view of the ’150 patent specification, one of ordinary skill in the art would understand that the meter 202 of *Dunstan* qualifies as a “base station,” and that the solenoid-operated valve 212 of *Dunstan* qualifies as a “water shut-off/on mechanism.” (Madisetti ¶88.) *Dunstan* teaches that the meter 202 is remotely controllable by disclosing that “the customer or water company 310 can utilize the connection to the valve 212 (See Fig. 2) to open or close (or partially restrict) the flow of water from a remote location.” (Ex. 1004, 3:36-39; Madisetti ¶88.)

As shown in Figure 2 below, *Dunstan* discloses that the meter 202 with valve 212 is “interposed between a water line from a water main and a water supply for said building or structure”; *Dunstan* also discloses that the meter 202 “is attached to a medium, such as the local delivery pipe 214, in a configuration similar to existing meters from a service distribution line to a destination point, such as the inside of the house 216.” (Ex. 1004, 2:13-18.)

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Dunstan, Figure 2



- c. *said remotely controllable base station with a said water shut-off/on mechanism being adapted to control the flow of water through said water supply to a residential home or industrial/commercial facility or building;*

Dunstan discloses this feature by teaching that “the valve 212 can be utilized by a homeowner to turn off his/her water (or gas, etc.) from inside his house (from his computer, etc.),” and that “a water company (or other service provider) may turn off (or increase or reduce) the water supply remotely for various possible reasons (e.g. a suspected water leak or to enforce water restrictions).” (Ex. 1004, 2:36-43; Madisetti ¶90.)

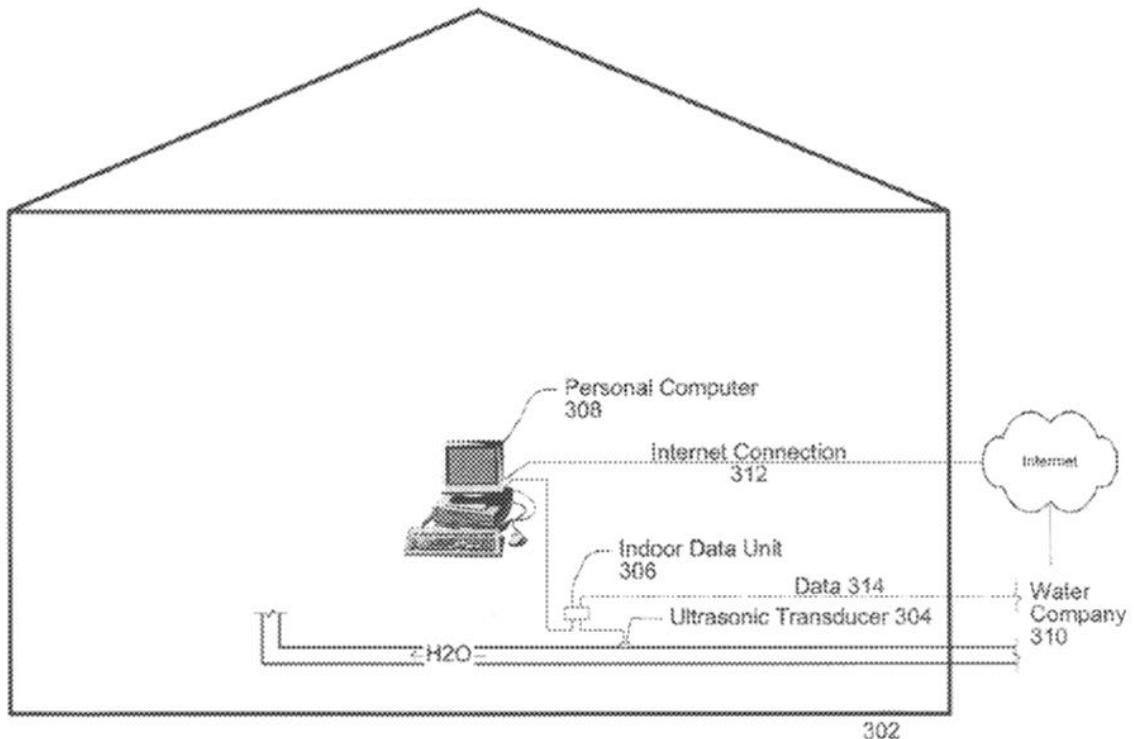
- d. *a wireless cell phone, smart phone or similar apparatus*

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in wireless communication with said remotely controllable base station with shut-off/on mechanism;

Dunstan and *Dawes* render this feature obvious. (*Madisetti ¶¶91-96.*) *Dunstan* discloses that the water company is in communication with the meter 202 and valve 212 remotely (i) via a personal computer 308 and “the Internet (or a dedicated connection, etc.)” or (ii) “directly from the data unit 306.” (Ex. 1004, 3:11-15, Figure 3.) *See also id.*, Figure 4d, 4:7-12 (disclosing meter 202 comprising an RF transmitter).

Dunstan, Figure 3



Dawes discloses “a wireless cell phone, smart phone or similar apparatus in wireless communication” with devices and equipment at a customer’s premises. For

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example, *Dawes* discloses that “[c]lients 120 used by end-users of the integrated security system 100 include . . . [a] mobile device 206 (e.g., PDA, mobile phone, etc.) accessing the integrated security system Mobile Portal. This type of client 206 is used by end-users to view system status and perform operations on devices (e.g., turning on a lamp, arming a security panel, etc.).” (Ex. 1005, ¶[0064]-[0067].) Similarly, *Dawes* teaches that “the customer may access and control the local security system, local IP devices such as cameras, local sensors and control devices (such as lighting controls or pipe freeze sensors), as well as the local security system panel and associated security sensors (such as door/window, motion, and smoke detectors).” (*Id.*, ¶[0131].) *See also id.*, ¶[0417]-[0418].

As shown in Figure 1 below, *Dawes* discloses that the client devices 120, such as a mobile phone, are in wireless communication with premises devices via the Internet and/or a cellular network. (*Id.*, Figure 1, ¶[0059].) *See also id.*, ¶[0045] (“With the integrated security system, conventional home security sensors, cameras, touchscreen keypads, lighting controls, and/or Internet Protocol (IP) devices in the home (or business) become connected devices that are accessible anywhere in the world from a web browser, mobile phone or through content-enabled touchscreens.”); ¶[0310] (describing broad range of computer networks and computing devices suitable for use with system).

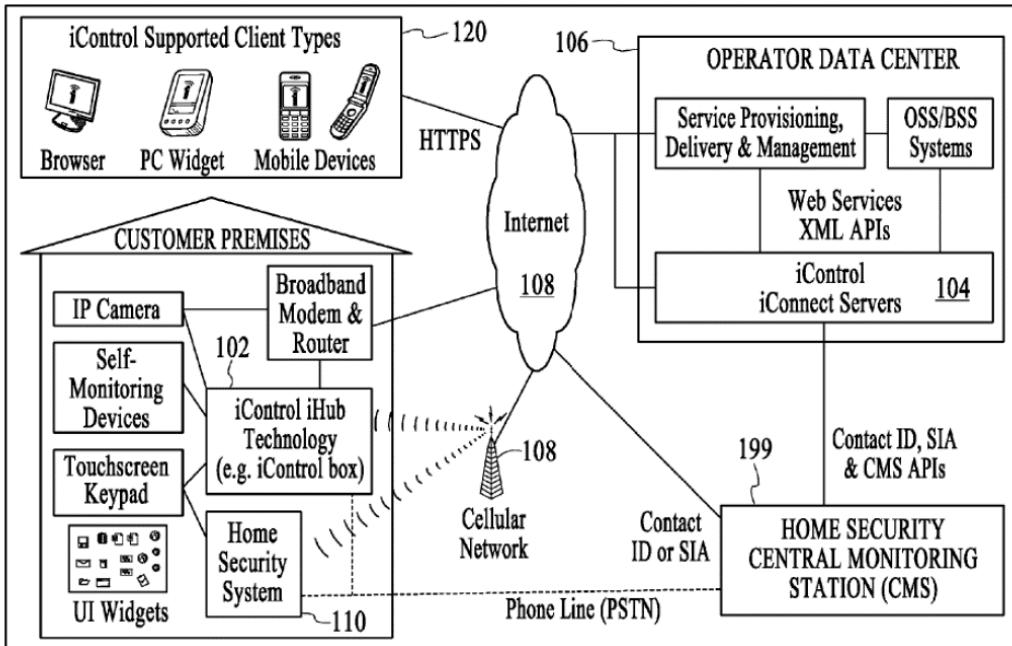
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U.S. Patent No. 9,297,150**Dawes, Figure 1**

FIG.1

In addition, *Dawes* discloses a “touchscreen” that “operates wirelessly with a premise security system.” (Ex. 1005, ¶[0160].) *Dawes* teaches that the touchscreen “incorporates an RF transceiver component” that can communicate directly with the home sensors. (*Id.*) *See also* Figure 2 (showing a “PC Widget or Touchscreen Keypad” 208 as among the client devices 120 in wireless communication with the system via the internet and, e.g., a mobile portal). *Dawes* also teaches that a “gateway device and its functionality can be incorporated into the touchscreen so that the device management module, which is now a component of or included in the touchscreen, is in charge of the discovery, installation and configuration of the IP

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devices coupled or connected to the system.” (*Id.*) Figure 8 of *Dawes* shows “an example screenshot 800 of a networked security touchscreen,” including a user interface 206 that has “icons by which a user selects or interacts with additional services or components (e.g., intercom control, security, cameras) coupled to the system in particular regions (e.g., front door, baby, etc.) available via the touchscreen.” (*Id.*, ¶[0148].)

Dawes, Figure 8

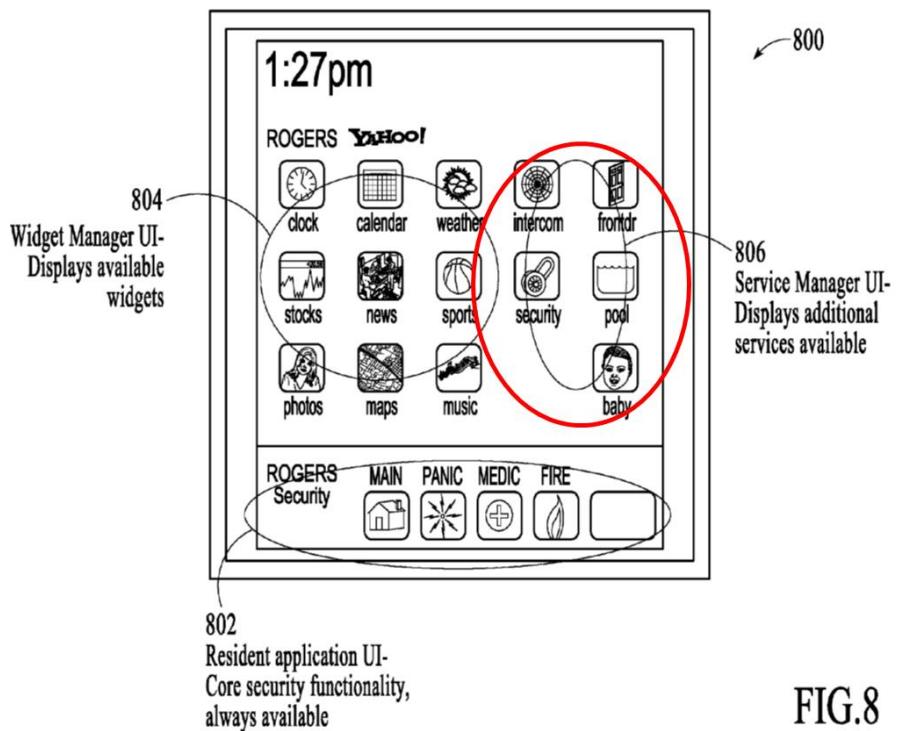


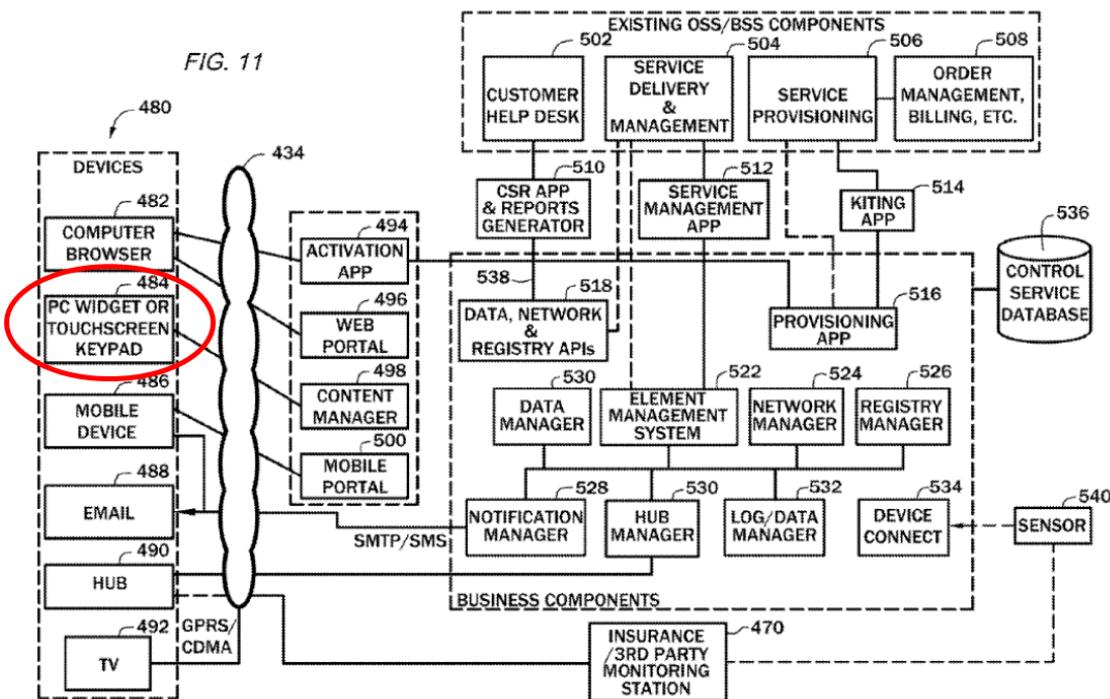
FIG.8

In view of the '150 patent specification, a person of ordinary skill in the art would understand that the touchscreen of *Dawes* is a wireless cell phone, smart phone or similar apparatus in wireless communication with premises devices.

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(Madisetti ¶95.) Indeed, Figure 11 of the '150 patent (which was copied from Figure 2 of *Dawes*) depicts a “PC Widget or Touchscreen Keypad” 484 as among the apparatus/devices 480 in wireless communication with the remotely controllable base station (Ex. 1001, 17:61-18:1).

'150 Patent, Figure 11



As explained above, a person of ordinary skill in the art would have been motivated and found it obvious to provide wireless communication between the cell phone or touchscreen of *Dawes* and the base station of *Dunstan* to give users better access to information about their water usage and more convenient control over their water supply. (Madisetti ¶96.) Thus, *Dunstan* in view of *Dawes* renders this claimed

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feature obvious. (*Id.*)

- e. *said remotely controllable base station including a recording compliance data means;*

As an initial matter, although the Examiner pointed to this feature in his reasons for allowance of claim 8 during prosecution (Ex. 1002, 283), in the pending *ex parte* reexamination of the '150 patent, the Examiner expressly found that each of the *eight* prior art references at issue discloses a “recording compliance data means” as set forth in claim 8 (Ex. 1003, 295-301).

Dunstan also discloses this feature in connection with disclosing that flow information is recorded in the memory of a data unit 208 of the water meter 202. (Madisetti ¶98.) For example, *Dunstan* teaches that the “electronic data unit 208 monitors the rotation of the impeller and calculates a volumetric flow rate of the water.” (Ex. 1004, 2:22-24.) *Dunstan* further teaches that “the data unit 208 may also utilize memory (not shown) to calculate the total amount of water delivered from a certain point in time, e.g. the last billing period,” and that “the data unit 208 may also calculate other statistics such as water delivery volume or flow rate between two specific points in history.” (*Id.*, 2:24-31.) *Dunstan* refers to the information calculated by the data unit 208 as “flow information.” (*Id.*, Title, 2:32-34.)

Dunstan teaches that flow information may be “communicated 314 to water company 310 directly from [an indoor] data unit 306” shown in Figure 3. (*Id.*, 3:14-

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16.) *Dunstan* also teaches that, “[i]n one embodiment . . . flow information is stored at [the] outdoor data unit 208 (See FIG. 2) [and] the information can be accessed upon request.” (*Id.*, 3:33-36.) *See also id.*, Figure 4d (showing data unit with RF transmitter). A person of ordinary skill in the art would have understood from this disclosure that *Dunstan* teaches the use of memory accessible for transferring flow information wirelessly. (Madisetti ¶99.)

A person of ordinary skill would have also understood from the disclosure in *Dunstan* that the data stored at the data unit 208 comprises compliance use data. (Madisetti ¶100.) For example, *Dunstan* teaches that the flow information stored at the data unit 208 “may be used to determine compliance with water use restrictions such as seasonal ‘no lawn watering’ on certain days of the week.” (Ex. 1004, 3:19-21.) A person of ordinary skill in the art would have understood from this disclosure that data used to determine compliance with water use restrictions comprises “compliance use data” under the ordinary meaning of that term. (Madisetti ¶100.)

Moreover, a person of ordinary skill would have understood from the disclosure in *Dunstan* that the data stored at the data unit 208 includes a time and date stamp. (Madisetti ¶101.) For example, *Dunstan* teaches that the water company may use the flow information “to determine if there is a potential water leak at a customer’s residence.” (Ex. 1004, 3:16-19.) *Dunstan* further teaches that “the water company could institute different pricing for usage at different times of the day. A

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schedule may be utilized that is developed based on peak usage times of the area. This would help the water company 310 more readily balance supply and demand throughout all time periods.” (*Id.*, 3:22-26.) Because *Dunstan* discloses recording flow information for each day of the week and at different times of the day, a person of ordinary skill in the art would have understood *Dunstan* to teach that the data stored in the memory of the data unit includes a time and date stamp. (Madisetti ¶101.)

To the extent that the Board construes “compliance use data” as limited to the example described in the ’150 patent specification, namely, a “time and date stamp for recording each water system shut off or turn on occurrence” (Ex. 1001, 11:10-11), *Dunstan* discloses this feature. (Madisetti ¶102.) As shown above, *Dunstan* discloses that the water company may use the data stored at the data unit 208 to determine if there is a water leak and that the data includes the flow rate throughout the day. (Ex. 1004, 3:16-26.) A person of ordinary skill in the art would have understood from the disclosure in *Dunstan* that data stored in the data unit 208 records each water system shut off or turn on occurrence and that the water company could use the stored data to determine if, during a particular leak damage event, the water prevention technology was utilized to stop the flow of water. (Madisetti ¶102.)

At a minimum, *Dunstan* and *Dawes* render this feature obvious. (Madisetti ¶¶103-104.) *Dawes* discloses that “[a]ll changes in device states are monitored and

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logged,” such as the front door being opened and “going to ‘open’ state.” (Ex. 1005, ¶¶[0075]-[0076].) *Dawes* specifically teaches that data for the current state of devices and “historical state data (a.k.a. ‘logs’)” are stored in the database. (*Id.*, ¶[0081].) In view of *Dawes*’s disclosure of recording all changes in device states, a person of ordinary skill in the art would have been motivated and found it obvious to record in the memory of the *Dunstan* data unit 208 a time and date stamp for each change in state of the valve 212 and thus record each water system shut off or turn on occurrence. (Madisetti ¶103.) A person of ordinary skill would have understood that such data could be used to determine if individuals are utilizing the water damage prevention technology or if, during a particular leak damage event, the water damage prevention technology was utilized. (*Id.*)

A skilled artisan would have been motivated to record each change in state of the valve 212 to enable users and the water company to monitor for water system shut off or turn on occurrences and be notified when the water is shut off or turned on in the home. (Madisetti ¶104; Ex. 1005, ¶[0042] (“Users can also receive notifications via email or text message when happenings occur, or do not occur, in their home.”). Thus, at a minimum, *Dunstan* in view of *Dawes* renders this feature obvious. (Madisetti ¶104.)

f. said cell phone, smart phone or similar apparatus having an application (“APP”), that functions to cooperate with said cell phone, smart phone, or similar apparatus to

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send a wireless signal to said base station, said signal functions turning said water supply on or off;

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶¶105-108.)

Dunstan discloses that the water company is in communication with the meter 202 and valve 212 remotely (i) via a personal computer 308 and “the Internet (or a dedicated connection, etc.)” or (ii) “directly from the data unit 306.” (Ex. 1004, 3:11-15, Figure 3.) *See also id.*, Figure 4d, 4:7-12 (disclosing meter 202 comprising an RF transmitter). *Dunstan* teaches that “the customer or water company 310 can utilize the connection to the valve 212 (See FIG. 2) to open or close (or partially restrict) the flow of water from a remote location.” (*Id.*, 3:36-39.)

Dawes teaches that client devices 120, such as a mobile phone, are in wireless communication with premises devices via the Internet and/or a cellular network. (Ex. 1005, Figure 1, ¶[0059], ¶[0045], ¶[0310]). *Dawes* further discloses providing a “user interface subsystem” that enables “a user to monitor, manage, and control the system and associated sensors and security systems.” (*Id.*, ¶[0210].) In particular, *Dawes* teaches that, in one embodiment, “a user interface subsystem is a mobile phone application enabling users to monitor and control the extant security system as well as other non-security devices.” (*Id.*, ¶[212].) A person of ordinary skill in the art would understand from this disclosure that *Dawes* teaches a software program designed to run on a cell phone, smart phone, or other mobile device. (Madisetti

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¶106.)

As explained above, a skilled artisan would have been motivated and found it obvious to provide wireless communication between the cell phone and app of *Dawes* and the base station of *Dunstan* to give users better access to information about their water usage and more convenient control over their water supply. (Madisetti ¶107.) In particular, a person of ordinary skill in the art would have been motivated to use an app as disclosed in *Dawes* – which the '150 patent describes as “commonly known” and used with “typical” cell phones (Ex. 1001, 13:14-21) – to provide an easy-to-use and easy-to-modify user interface. (Madisetti ¶107.)

For example, *Dawes* teaches that “the touchscreen utilizes a modular user interface that allows components to be modified easily by a service provider, an installer, or even the end user.” (Ex. 1005, ¶[0135].) *Dawes* discloses that “[e]xamples of such a modular approach include using Flash widgets, HTML-based widgets, or other downloadable code modules such that the user interface of the touchscreen can be updated and modified while the application is running.” (*Id.*) *Dawes* also teaches that “user interface modules can be downloaded over the internet,” e.g., “a new security configuration widget can be downloaded from a standard web server, and the touchscreen then loads such configuration app into memory, and inserts it in place of the old security configuration widget.” (*Id.*)

Thus, *Dunstan* in view of *Dawes* renders this claimed feature obvious.

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(Madisetti ¶109.)

g. *said cell phone, smart phone, or similar apparatus having an application that communicates wirelessly with said base station to receive a wireless communication that provides an indicating means for determining an operational state or position of the shut-off/on mechanism, and*

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶110.) *Dawes* discloses that “[a]utomation devices (cameras, lamp modules, thermostats, etc.) can be added [to the system], enabling users to remotely see live video and/or pictures and control home devices via their personal web portal or webpage, mobile phone, and/or other remote client device. Users can also receive notifications via email or text message when happenings occur, or do not occur, in their home.” (Ex. 1005, ¶[0042].) *Dawes* further teaches the use of a “user interface subsystem” that enables “users to view the state of all sensors and controllers in the extant security system from a web browser or equivalent operating on a computer, PDA, mobile phone, or other consumer device.” (*Id.*, ¶[0210].) As noted above, *Dawes* teaches that, in one embodiment, “a user interface subsystem is a mobile phone application enabling users to monitor and control the extant security system as well as other non-security devices.” (*Id.*, ¶[212].) Because *Dawes* teaches the use of a mobile phone application that enables users to view the state of all controllers in the system, a person of ordinary skill in the art would have understood *Dunstan* in view of *Dawes* to disclose

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that the mobile phone application receives a wireless communication that provides an indicating means (e.g., a visual signal) for determining an operational state or position of the shut-off/on mechanism. (Madisetti ¶110.)

h. said cell phone, smart phone or similar apparatus having the capability to receive a wireless electronic communication whereby said cell phone, smart phone or similar apparatus includes an indicating means for determining the operational state or position of the shut-off/on mechanism.

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶111.) Indeed this feature is not significantly different from the previous claim feature, discussed immediately above. *Dawes* discloses that “[a]utomation devices (cameras, lamp modules, thermostats, etc.) can be added [to the system], enabling users to remotely see live video and/or pictures and control home devices via their personal web portal or webpage, mobile phone, and/or other remote client device. Users can also receive notifications via email or text message when happenings occur, or do not occur, in their home.” (Ex. 1005, ¶[0042].) *Dawes* further teaches the use of a “user interface subsystem” that enables “users to view the state of all sensors and controllers in the extant security system from a web browser or equivalent operating on a computer, PDA, mobile phone, or other consumer device.” (*Id.*, ¶[0210].) As noted above, *Dawes* teaches that, in one embodiment, “a user interface subsystem is a mobile phone application enabling users to monitor and control the extant security system

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as well as other non-security devices.” (*Id.*, ¶[212].) Because *Dawes* teaches the use of a mobile phone application that enables users to view the state of all controllers in the system, a person of ordinary skill in the art would have understood *Dunstan* in view of *Dawes* to disclose that the mobile phone has the capability to receive a wireless electronic communication whereby the mobile phone includes an indicating means (e.g., visual signal) for determining the operational state or position of the shut-off/on mechanism. (Madisetti ¶111.)

3. Claim 15

- a. *A building or structure water damage prevention system as recited in claim 8, wherein said base station with water shut-off/on mechanism includes flow sensor to measure water volume that can be [sic] transfer water flow data or information to said cell phone, smart phone or similar apparatus,*

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶¶112-116.)

Dunstan discloses that at the meter 202 with valve 212, “an impeller 204 is caused to turn by the flow of the metered substance (e.g. water) 206 directed through its blades. In one embodiment, an electronic data unit 208 monitors the rotation of the impeller and calculates a volumetric flow rate of the water (or other substance).”

(Ex. 1004, 2:19-24.) *Dunstan* also discloses that the data unit 208 may calculate “statistics such as water delivery volume or flow rate between two specific points in history.” (*Id.*, 2:27-29.) A skilled artisan would have understood from this disclosure

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that *Dunstan* discloses a base station with water shut-off/on mechanism that includes a flow sensor to measure water volume. (Madisetti ¶112.)

Dunstan discloses that the water company is in communication with the meter 202 and valve 212 remotely (i) via a personal computer 308 and “the Internet (or a dedicated connection, etc.)” or (ii) “directly from the data unit 306.” (Ex. 1004, 3:11-15, Figure 3.) *See also id.*, Figure 4d, 4:7-12.

Dawes discloses “a wireless cell phone, smart phone or similar apparatus in wireless communication” with devices and equipment at a customer’s premises. For example, *Dawes* discloses that “[c]lients 120 used by end-users of the integrated security system 100 include . . . [a] mobile device 206 (e.g., PDA, mobile phone, etc.) accessing the integrated security system Mobile Portal. This type of client 206 is used by end-users to view system status and perform operations on devices (e.g., turning on a lamp, arming a security panel, etc.).” (Ex. 1005, ¶[0064]-[0067].) Similarly, *Dawes* teaches that “the customer may access and control the local security system, local IP devices such as cameras, local sensors and control devices (such as lighting controls or pipe freeze sensors), as well as the local security system panel and associated security sensors (such as door/window, motion, and smoke detectors).” (*Id.*, ¶[0131].) *See also id.*, ¶[0417]-[0418].

Dawes discloses that the client devices 120, such as a mobile phone, are in wireless communication with premises devices via the Internet and/or a cellular

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network. (*Id.*, Figure 1, ¶[0059].) *See also id.*, ¶[0045], ¶[0310].

A person of ordinary skill in the art would have been motivated and found it obvious to transfer water flow data from the data unit 208 of *Dunstan* to a cell phone, smart phone, or similar apparatus in view of *Dawes*'s disclosure of client devices, such as a mobile phone, in wireless communication with premises devices via the Internet and/or a cellular network. (Madisetti ¶116.) As explained above, a skilled artisan would have been motivated to provide wireless communication between the cell phone and app of *Dawes* and the base station of *Dunstan* to give users better access to information about their water usage and more convenient control over their water supply, particularly in cases of a suspected water leak. (*Id.*)

- b. *said base station with water shut-off/on mechanism and flow sensor interposed between a main water meter and the water supply for said building or structure, or functions as the main water meter.***

Dunstan discloses this feature. *Dunstan* discloses that the meter 202 with valve 212 and flow sensor is “interposed between a water line from a water main and a water supply for said building or structure”; *Dunstan* also discloses that the meter 202 “is attached to a medium, such as the local delivery pipe 214, in a configuration similar to existing meters from a service distribution line to a destination point, such as the inside of the house 216.” (*Id.*, 2:13-18, Figure 2; Madisetti ¶117.)

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4. Claim 17

a. A building or structure water damage prevention system as recited in claim 8, wherein said remotely controllable base station and said wireless cell phone, smart phone or similar apparatus includes pairing technology to provide a specific wireless communication means between said remotely controllable base station and said wireless cell phone, smart phone or similar apparatus.

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶¶118-119.) As shown above, *Dunstan* teaches a remotely controllable base station in wireless communication with the water company, (Ex. 1004, 3:11-15, Figure 3, Figure 4d, 4:7-12), and *Dawes* teaches the use of devices such as a mobile phone or touchscreen that are in wireless communication with premises devices via the Internet and/or a cellular network. (Ex. 1005, Figure 1, ¶[0059], ¶[0045] ¶[0310].) Thus, as further shown above, a skilled artisan would have been motivated and found it obvious in view of *Dawes* to provide a wireless cell phone, smart phone or similar apparatus in wireless communication with the remotely controllable base station of *Dunstan*. (Madisetti ¶118.)

Dawes discloses pairing technology for providing specific wireless communication between a client device, such as a touchscreen, and a premises device. (Madisetti ¶119.) For example, *Dawes* discloses that “[a] touchscreen-enabled device is assigned a unique activation key for activation with an iConnect server.” (Ex. 1005, ¶[0171].) *Dawes* teaches that “[p]artners deploying touchscreen-

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enabled devices have the knowledge that only a [touchscreen] with the correct serial number and activation key can be activated for use with an iConnect server.” (*Id.*) In view of the ’150 patent specification, a skilled artisan would understand that *Dawes* teaches the use of pairing technology to provide a specific wireless communication means between the remotely controllable base station and the wireless cell phone, smart phone or similar apparatus. (Madisetti ¶119.) In this regard, the ’150 patent specification includes copied disclosure from *Dawes* teaching that device activation is an example of a “pairing process.” Ex. 1001, 17:57-60 (“Remote devices can only access the networks to which they have been granted permission through activation (e.g. pairing process.”); Ex. 1005, ¶[0074]. A skilled artisan would have been motivated to use pairing technology to provide security and reliability to the wireless communications between the base station and the cell phone. (Madisetti ¶119.)

5. Claim 20

- a. *[sic] building or structure water damage prevention system as recited in claim 8, wherein said remotely controllable base station calls or sends a text message to the cell phone, smart phone or similar apparatus or communicates with a residential or industrial/commercial owner or municipality agency or insurance company when a leak is detected by one or more leak sensors.*

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶120.) As

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discussed above, *Dunstan* discloses that flow information may be used to determine if there is a potential water leak at a customer's residence. (Ex. 1004, 3:16-19.) *Dawes* discloses that “[u]sers can also receive notifications via email or text message when happenings occur, or do not occur, in their home.” (Ex. 1005, ¶[0042].) *Dawes* also discloses that remote client devices include “cell phones that receive SMS-based notifications when certain events occur (or don't occur) [and] email clients that receive an email message with similar information, etc.” (*Id.*, ¶[0070].) *See also id.*, ¶[0075], ¶[0084].⁸

A skilled artisan would have been motivated and found it obvious to send a text message from the base station of *Dunstan* to a cell phone as taught by *Dawes* when a leak is detected to alert the customer and minimize or prevent water damage to the building or structure. (Madisetti ¶121.)

6. Claim 21

- a. *A building or structure water damage prevention system, said system comprising:*

Dunstan discloses this feature for the same reasons explained above in Section VII.B.2.a. for claim 8, which addresses identical language. (Madisetti ¶122.)

- b. *a remotely controllable base station with a water shut-off/on mechanism interposed between a water line from*

⁸ *Dawes*'s disclosure of a “Notification Manager” was copied verbatim and included in the '150 patent specification. Ex. 1001, 18:37-40.

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a water main and a water supply for said building or structure;

Dunstan discloses this feature for the same reasons explained above in Section VII.B.2.b. for claim 8, which addresses identical language. (Madisetti ¶123.)

c. said remotely controllable base station with a said water shut-off/on or mechanism being adapted to control the flow of water through said water supply to a residential home or industrial/commercial facility or building;

Dunstan discloses this feature for the same reasons explained above in Section VII.B.2.c. for claim 8, which addresses nearly identical language. The only difference between this feature and that of claim 8 is that whereas claim 8 recites “a said water shut-off/on mechanism,” claim 21 recites “a said water shut-off/on or mechanism,” which is not a substantive difference for purposes of this Petition. (Madisetti ¶124.)

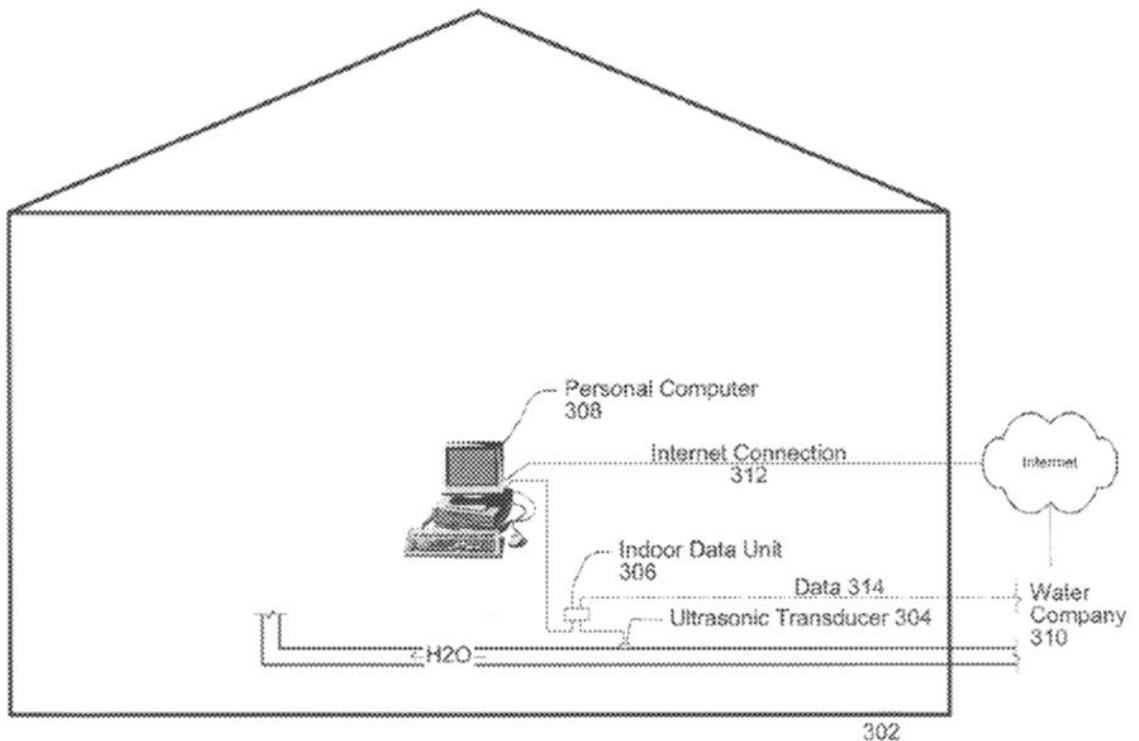
d. an alarm or computer system;

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶¶125-131.)

Dunstan discloses that the water company is in communication with the meter 202 and valve 212 remotely (i) via a personal computer 308 and “the Internet (or a dedicated connection, etc.)” or (ii) “directly from the data unit 306.” (Ex. 1004, 3:11-15, Figure 3.) See also *id.*, Figure 4d, 4:7-12.

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Dunstan, Figure 3



Dawes discloses a “computer system” in wireless communication with devices and equipment at a customer’s premises. For example, *Dawes* discloses that “[c]lients 120 used by end-users of the integrated security system 100 include . . . [a] web browser 204 accessing a Web Portal application, performing end-user configuration and customization of the integrated security system service as well as monitoring of in-home device status, viewing photos and video, etc.” and “PC or browser-based ‘widget’ containers 208 that present integrated security system service content, as well as other third-party content, in simple, targeted ways (e.g. a widget that resides on a PC desktop and shows live video from a single in-home

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camera).” (Ex. 1005, ¶[0064]-[0068].) *See also id.*, claim 43 (reciting that “the remote client devices include one or more of *personal computers*, personal digital assistants, cellular telephones, and mobile computing devices”). Similarly, *Dawes* teaches that “the customer may access and control the local security system, local IP devices such as cameras, local sensors and control devices (such as lighting controls or pipe freeze sensors), as well as the local security system panel and associated security sensors (such as door/window, motion, and smoke detectors).” (*Id.*, ¶[0131].) *See also id.*, ¶[0417]-[0418].

As shown in Figure 1 below, *Dawes* discloses that the client devices 120, such as a browser, PC widget, and mobile phones, are in wireless communication with premises devices via the Internet and/or a cellular network. (*Id.*, Figure 1, ¶[0059].) *See also id.*, ¶[0045], ¶[0310].

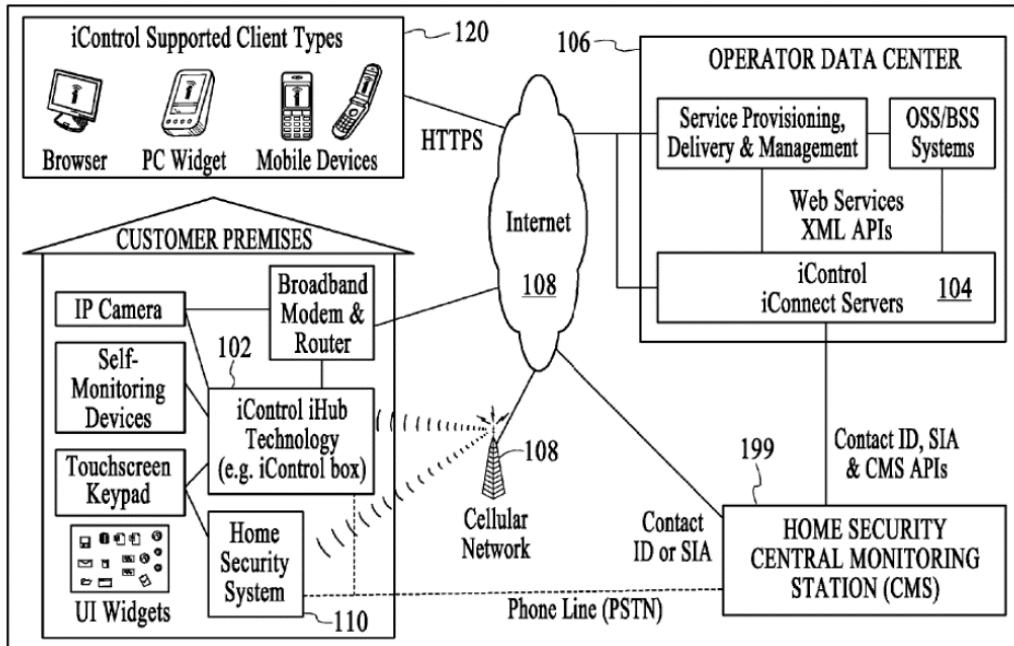
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FIG.1

In addition, *Dawes* discloses a “touchscreen” that “operates wirelessly with a premise security system.” (Ex. 1005, ¶[0160].) *Dawes* teaches that the touchscreen “incorporates an RF transceiver component” that can communicate directly with the home sensors. (*Id.*) *See also* Figure 2 (showing a “PC Widget or Touchscreen Keypad” 208 as among the client devices 120 in wireless communication with the system via the internet and, e.g., a mobile portal). *Dawes* also teaches that a “gateway device and its functionality can be incorporated into the touchscreen so that the device management module, which is now a component of or included in the touchscreen, is in charge of the discovery, installation and configuration of the IP

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devices coupled or connected to the system.” (*Id.*) With reference to Figure 4, *Dawes* discloses that the gateway comprises “any number of processors,” “memory (e.g., FLASH 404, RAM 406, etc.) and any number of input/output (I/O) ports 408.” (*Id.*, ¶[0124]).

Dawes, Figure 4

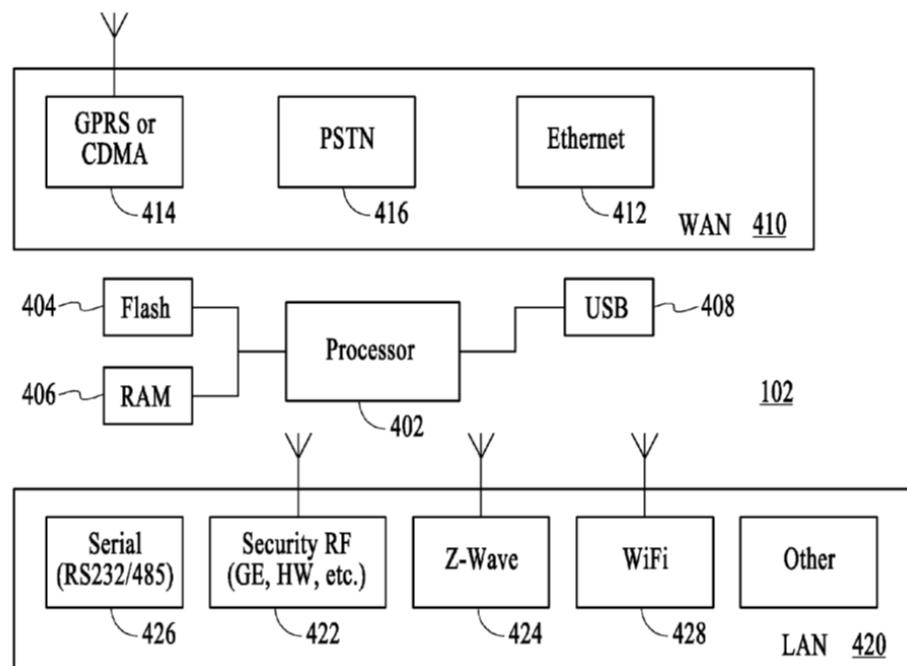


FIG.4

Figure 8 of *Dawes* shows “an example screenshot 800 of a networked security touchscreen,” including a user interface 206 that has “icons by which a user selects or interacts with additional services or components (e.g., intercom control, security, cameras) coupled to the system in particular regions (e.g., front door, baby, etc.) available via the touchscreen.” (*Id.*, ¶[0148].)

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Dawes, Figure 8

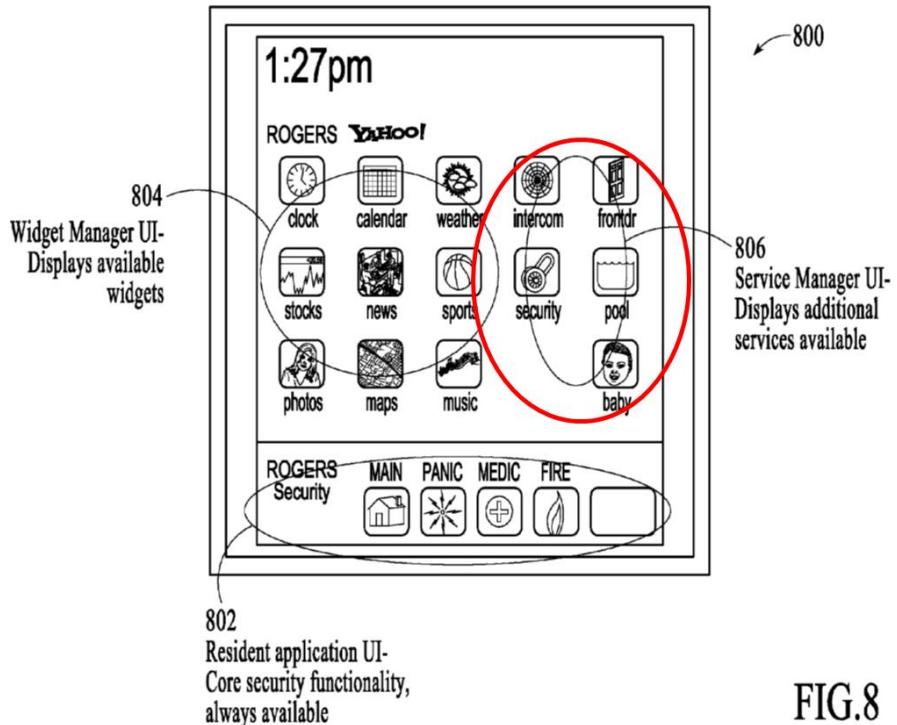
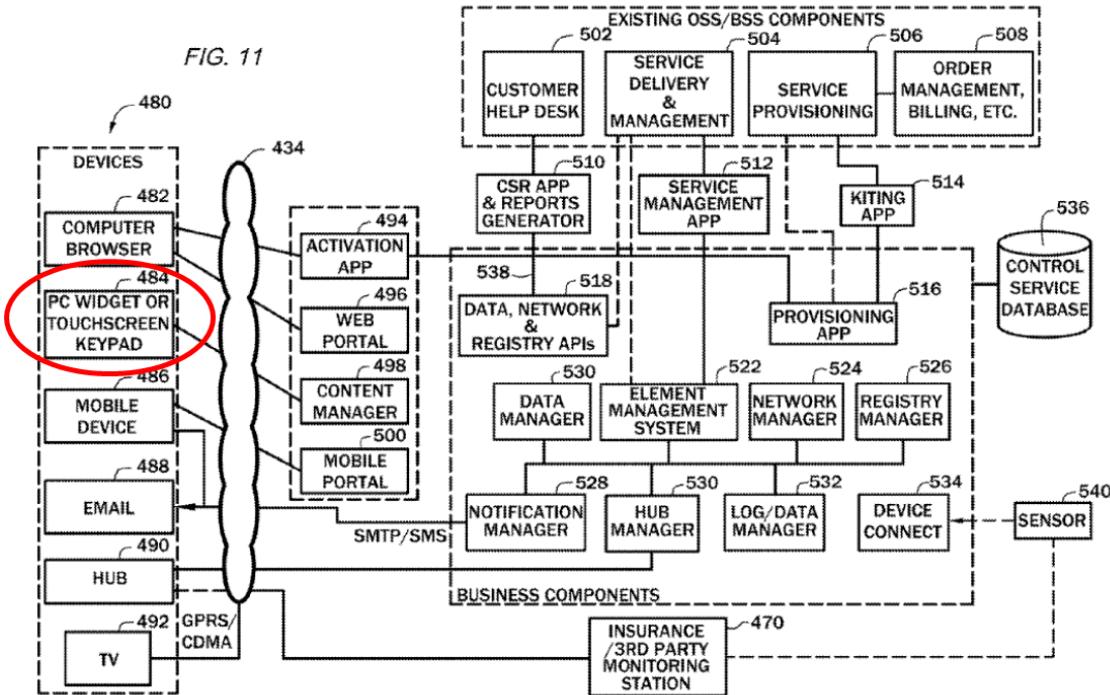


FIG.8

In view of the '150 patent specification, a person of ordinary skill in the art would understand that the touchscreen with incorporated gateway of *Dawes* is a “computer system” in wireless communication with premises devices. (Madisetti ¶130.) Indeed, Figure 11 of the '150 patent (which was copied from Figure 2 of *Dawes*) depicts a “PC Widget or Touchscreen Keypad” 484 as among the apparatus/devices 480 in wireless communication with the remotely controllable base station (Ex. 1001, 17:61-18:1).

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'150 Patent, Figure 11



As explained above, a person of ordinary skill in the art would have been motivated and found it obvious to provide wireless communication between the computer system of *Dawes* and the base station of *Dunstan* to give users better access to information about their water usage and more convenient control over their water supply. (Madisetti ¶131.) Thus, *Dunstan* in view of *Dawes* renders this claimed feature obvious. (*Id.*)

e. said remotely controllable base station including a recording compliance data means;

Dunstan discloses this feature for the same reasons explained above in Section VII.B.2.e. for claim 8, which addresses identical language. (Madisetti ¶132.)

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f. *said alarm or computer system includes electronic circuitry to send a wireless signal to said remotely controllable base station to turn said water supply on and off,*

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶¶133-135.)

Dunstan discloses that the water company is in communication with the meter 202 and valve 212 remotely (i) via a personal computer 308 and “the Internet (or a dedicated connection, etc.)” or (ii) “directly from the data unit 306.” (Ex. 1004, 3:11-15, Figure 3.) *See also id.*, Figure 4d, 4:7-12. *Dunstan* teaches that “the customer or water company 310 can utilize the connection to the valve 212 (See FIG. 2) to open or close (or partially restrict) the flow of water from a remote location.” (*Id.*, 3:36-39.)

Dawes teaches that a computer system, such as at least a browser, PC widget, or touchscreen with incorporated gateway, is in wireless communication with premises devices via the Internet and/or a cellular network. (Ex. 1005, Figure 1, ¶[0059], ¶[0045], ¶[0165], ¶[0310].) *Dawes* further discloses that “[a]n iControl Web Portal Application 272 runs on PC browsers and delivers the web-based interface to the integrated security system service. This application allows users to manage their networks (e.g. add devices and create automations) as well as to view/change device states, and manage pictures and videos.” (*Id.*, ¶[0099].)

It would have been obvious to one of ordinary skill in the art to provide

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wireless communication between the base station of *Dunstan* and a computer system as taught by *Dawes* to send a wireless signal to the base station and turn the water supply on or off. (Madisetti ¶135.) As explained above, a skilled artisan would have been motivated and found it obvious to provide wireless communication between the computer system of *Dawes* and the base station of *Dunstan* to give users better access to information about their water usage and more convenient control over their water supply. (*Id.*) Thus, *Dunstan* in view of *Dawes* renders this claimed feature obvious. (*Id.*)

g. *said wireless signal utilizing encryption, authentic, integrity and/or non-repudiate technology, and*

Dunstan in view of *Dawes* renders this feature obvious. (Madisetti ¶¶136-137.) As shown above, *Dunstan* teaches a remotely controllable base station in wireless communication with the water company (Ex. 1004, 3:11-15, Figure 3, Figure 4d, 4:7-12), and *Dawes* teaches a computer system, such as at least a browser, PC widget, or touchscreen with incorporated gateway, in wireless communication with premises devices via the Internet and/or a cellular network. (Ex. 1005, Figure 1, ¶[0059], ¶[0045], ¶[0165], ¶[0310].)

Dawes discloses that to provide “security for the IP communications (e.g., authentication, authorization, encryption, anti-spoofing, etc), the integrated security system uses SSL to encrypt all IP traffic, using server and client-certificates for

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authentication, as well as authentication in the data sent over the SSL-encrypted channel.” (Ex. 1005, ¶[0057].) *Dawes* also discloses that “[f]or encryption, integrated security system issues public/private key pairs at the time/place of manufacture, and certificates are not stored in any online storage in an embodiment.” (*Id.*) A skilled artisan would have been motivated and found it obvious in view of *Dawes* to provide wireless signals utilizing encryption, authentic, integrity and/or non-repudiate technology between the computer system of *Dawes* and the remotely controllable base station of *Dunstan*. (Madisetti ¶137.) For example, a skilled artisan would be motivated to use encryption, authentic, integrity and/or non-repudiate technology to restrict access and protect the information transmitted in the wireless signals. (*Id.*)

h. *said alarm or computer system having the capability to receive a wireless electronic communication whereby said alarm or computer includes an indicating means for determining an operational state or position of the shut-off/on mechanism.*

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶138.) *Dawes* discloses that “[a]utomation devices (cameras, lamp modules, thermostats, etc.) can be added [to the system], enabling users to remotely see live video and/or pictures and control home devices via their personal web portal or webpage, mobile phone, and/or other remote client device. Users can also receive notifications via email or text message when happenings occur, or do not occur, in their home.” (Ex. 1005,

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¶[0042].) *Dawes* further teaches the use of a “user interface subsystem” that enables “users to view the state of all sensors and controllers in the extant security system from a web browser or equivalent operating on a computer, PDA, mobile phone, or other consumer device.” (*Id.*, ¶[0210].) Because *Dawes* teaches the use of a computer system that enables users to view the state of all controllers in the system, a person of ordinary skill in the art would have understood *Dunstan* in view of *Dawes* to disclose that the computer system includes an indicating means (e.g., visual signal) for determining an operational state or position of the shut-off/on mechanism. (Madisetti ¶138.)

7. Claim 26

- a. *A building or structure water damage prevention system as recited in claim 21, said alarm or computer system and said remotely controllable base station requires an initial pairing technology to provide a specific wireless communication means between with said alarm or computer system and said remotely controllable base station.*

Dunstan and *Dawes* render this feature obvious. (Madisetti ¶139-140.) As shown above, *Dunstan* teaches a remotely controllable base station in wireless communication with the water company (Ex. 1004, 3:11-15, Figure 3, Figure 4d, 4:7-12), and *Dawes* teaches a computer system, such as at least a browser, PC widget, or touchscreen with incorporated gateway, in wireless communication with premises devices via the Internet and/or a cellular network. (Ex. 1005, Figure 1,

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¶[0059], ¶[0045], ¶[0165], ¶[0310].) As further shown above, a skilled artisan would have been motivated and found it obvious in view of *Dawes* to provide a computer system in wireless communication with the remotely controllable base station of *Dunstan*. (Madisetti ¶139.)

Dawes discloses an initial pairing technology to provide a specific wireless communication means between the computer system and a premises device. For example, *Dawes* discloses that “[a] touchscreen-enabled device is assigned a unique activation key for activation with an iConnect server.” (Ex. 1005, ¶[0171].) *Dawes* teaches that “[p]artners deploying touchscreen-enabled devices have the knowledge that only a [touchscreen] with the correct serial number and activation key can be activated for use with an iConnect server.” (*Id.*) In view of the ’150 patent specification, a skilled artisan would understand that *Dawes* teaches the use of initial pairing technology to provide a specific wireless communication means between the remotely controllable base station and the computer system. (Madisetti ¶140.) In this regard, the ’150 patent specification includes copied disclosure from *Dawes* teaching that device activation is an example of a “pairing process.” Ex. 1001, 17:57-60 (“Remote devices can only access the networks to which they have been granted permission through activation (e.g. pairing process).”); Ex. 1005, ¶[0074]. A skilled artisan would have been motivated to use pairing technology to provide security and reliability to the wireless communications between the base station and computer

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system. (Madisetti ¶140.)

C. Ground 2: *Dunstan* and *Dawes* in View of *Kushner* Render Obvious Claims 12 and 23.

1. Rationale for Combining *Kushner* with *Dunstan* and *Dawes*

As described above, the system of *Kushner* addressed the need “for a simple, low cost system and method that can stop the flow of water when a leak develops.” (Ex. 1006, 2:7-8.) *Kushner* discloses a “control housing” 18 that contains a “systems controller that selectively operates [a] shut-off valve 16 depending upon signals from a flow meter 17.” (*Id.*, 3:8-10, Figure 1.) *Kushner* teaches that “if the systems controller 32 detects from the flow meter 17 that flow of water exceeds [a] threshold flow rate[,]” and “the flow of water above the threshold value continues beyond [a predetermined] period of time, the systems controller 32 activates the shut-off valve 16 and stops the flow of water from the water supply pipe 12.” (*Id.*, 4:29-38.)

It would have been obvious to one of ordinary skill in the art to program the base station of *Dunstan* to turn off the water supply upon the detection of a leak as taught by *Kushner*. (Madisetti ¶¶141-142.) Both *Dunstan* and *Kushner* relate specifically to water metering systems. Ex. 1004, 1:8-12; Ex. 1006, 1:7-12. Both *Dunstan* and *Kushner* also disclose solutions for turning off the supply of water to a structure upon detection of a leak. Ex. 1004, 2:2:39-43; Ex. 1006, 4:35-38. A skilled artisan would have recognized that *Dunstan* and *Kushner* are within the same field

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and directed to the same problems. (Madisetti ¶142.)

A person of ordinary skill in the art would have been motivated to program the base station of *Dunstan* to turn off the water supply upon the detection of a leak as taught by *Kushner* to automatically stop the flow of water when a leak develops. (Madisetti ¶143.) For example, *Kushner* discloses that “if a leak were to occur in the supply plumbing or in the fixtures that terminate the supply plumbing, water would continue to leak into that building indefinitely.” (Ex. 1006, 1:23-26.) *Kushner* teaches that “even small leaks can result in substantial volumes of water being released over time [and] even small leaks can cause flooding or other structural damage to a building.” (*Id.*, 1:26-29.) A person of ordinary skill in the art would have looked to *Kushner* and found a solution for “a simple, low cost system and method that can stop the flow of water when a leak develops.” (*Id.*, 2:7-8; Madisetti ¶143.)

A skilled artisan would have had a reasonable expectation of success by using the combination of *Dunstan*, *Dawes*, and *Kushner*, and would have expected the system to yield predictable results. (Madisetti ¶144.) *Dunstan* already discloses that the water meter with valve and data unit calculates statistics such as “water delivery volume or flow rate between two specific points in history” and is controllable to turn off the water supply remotely upon a suspected leak. (Ex. 1004, 2:23-38, 2:36-43.) *Kushner* merely provides additional programming that could be used to

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automatically stop the flow of water when a leak develops. (Madisetti ¶¶144.)

The obviousness of programing the base station of *Dunstan* to turn off the water supply upon the detection of a leak as taught by *Kushner* is confirmed by the Examiner's findings during prosecution that *Kushner* teaches the limitations of dependent claim 23 (then pending as claim 26) (Ex. 1002, 282), which require that "said remotely controllable base station includes one or more flow sensors and can be programmed to turn off the water supply upon the detection of a leak by one or more flow sensors." (Ex. 1001, claim 23.) These limitations are also the subject of dependent claim 12. (Ex. 1001, claim 12.) In response, Klicpera argued that independent claim 21 (then pending as claim 24) was allowable as amended, and did not refute the Examiner's application of *Kushner* to the subject matter of the dependent claims. (Ex. 1002, 308-309.)

2. Claim 12

- a. *A building or structure water damage prevention system as recited in claim 8, wherein said remotely controllable base station includes one or more flow sensors and can be programmed to turn off the water supply upon the detection of a leak by one or more flow sensors.*

Dunstan and *Dawes* in view of *Kushner* render this feature obvious. (Madisetti ¶¶146-148.) *Dunstan* discloses that at the meter 202 with valve 212, "an impeller 204 is caused to turn by the flow of the metered substance (e.g. water) 206 directed through its blades. In one embodiment, an electronic data unit 208 monitors

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the rotation of the impeller and calculates a volumetric flow rate of the water (or other substance).” (Ex. 1004, 2:19-24.) *Dunstan* also discloses that the data unit 208 may calculate “statistics such as water delivery volume or flow rate between two specific points in history.” (*Id.*, 2:27-29.) A skilled artisan would have understood from this disclosure that *Dunstan* discloses a base station with water shut-off/on mechanism that includes a flow sensor to measure water volume. (Madisetti ¶146.)

Kushner discloses a “control housing” 18 that contains a “systems controller that selectively operates [a] shut-off valve 16 depending upon signals from a flow meter 17.” (Ex. 1006, 3:8-10.) *Kushner* teaches that “if the systems controller 32 detects from the flow meter 17 that flow of water exceeds [a] threshold flow rate[,]” and “the flow of water above the threshold value continues beyond [a predetermined] period of time, the systems controller 32 activates the shut-off valve 16 and stops the flow of water from the water supply pipe 12.” (*Id.*, 4:29-38.)

As explained above, a person of ordinary skill in the art would have been motivated and found it obvious to program the base station of *Dunstan* to turn off the water supply upon the detection of a leak as taught by *Kushner* to automatically stop the flow of water when a leak develops. (Madisetti ¶148.)

3. Claim 23

- a. *A building or structure water damage prevention system as recited in claim 21 wherein said remotely controllable base station includes one of [sic] more flow sensors and*

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can be programmed to turn off the water supply upon the detection of a leak by one or more flow sensors.

Kushner discloses this feature for the same reasons explained above in Section VII.C.3.a. for claim 12, which addresses identical language. (Madisetti ¶149.)

D. No Secondary Considerations Exist

“[S]econdary considerations of nonobviousness . . . cannot overcome a strong *prima facie* case of obviousness.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). Where, as here, the claimed invention represents no more than “the predictable use of prior art elements according to their established functions,” secondary considerations are inadequate to establish non-obviousness as a matter of law. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). As explained in Grounds 1 and 2 above, the prior art renders obvious the challenged claims of the ’150 patent. No secondary indicia of non-obviousness having a nexus to the putative “invention” of the ’150 patent exist that are contrary to that conclusion. Mueller reserves its right to respond to any assertion of secondary indicia of non-obviousness advanced by Rein Tech.

VIII. CONCLUSION

For the foregoing reasons, Mueller requests that IPR of the ’150 patent be instituted.

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This 29th day of October, 2019.

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CERTIFICATE OF COMPLIANCE

I hereby certify that the foregoing Corrected Petition for *Inter Partes* Review complies with the type-volume limitation of 37 C.F.R. § 42.24(a)(1)(i) because it contains 13,740 words, excluding the parts of the Petition exempted by 37 C.F.R. § 42.24(a)(1).

I further certify that the foregoing Corrected Petition complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft Word 2016 in 14-point Times New Roman proportional font.

Dated: October 29, 2019

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105, the undersigned certifies that the foregoing Corrected Petition for *Inter Partes* Review of U.S. Patent No. 9,297,150 and supporting materials were served on this day by Priority Mail Express (i) at the correspondence address of record for the subject patent and (ii) at the additional addresses below known to the Mueller as likely to effect service:

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